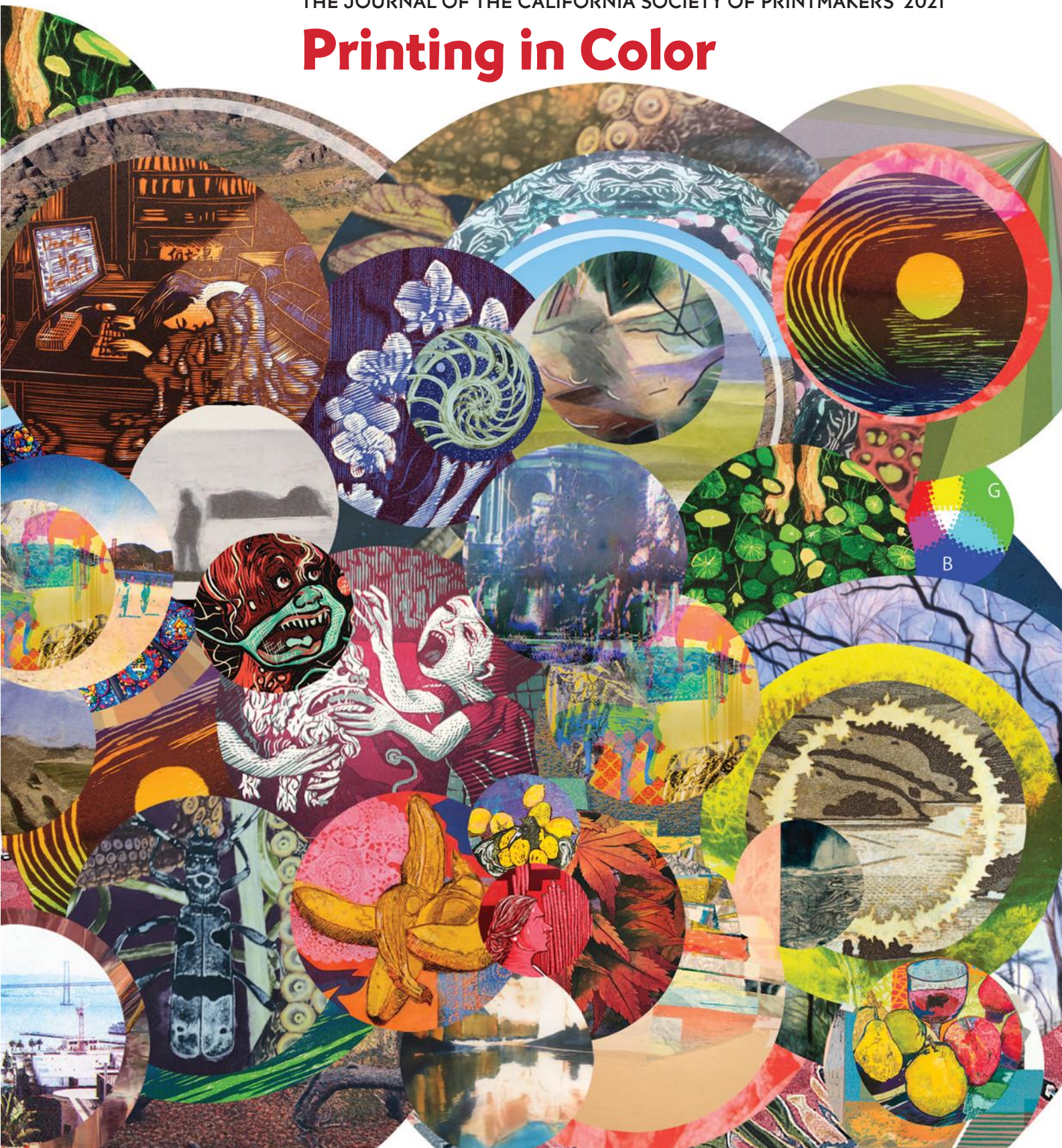




THE CALIFORNIA PRINTMAKER

THE JOURNAL OF THE CALIFORNIA SOCIETY OF PRINTMAKERS 2021

Printing in Color



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The California Printmaker.

EDITORIAL STATEMENT

There are myriad ways of understanding color, and this year's journal attempts to cover the range of methods printmakers have used color to represent their images. Traditional color theory is presented in a new fashion that plays with the additive and subtractive function of vision. Some artists focus on process, where color is slowly built up in layers of woodcut, linocut, aquatint or viscosity. Others focus on the ways that color can be emotive. It may represent a temperature, a certain atmosphere or a mood. It can also invoke a memory of place or a particular culture. The perception of color changes between cultures, color theories, digital platforms and even from one person to the next. This is an attempt to present this enigma, the way artists see it.

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Eva Bernstein
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ABOUT CSP

Dear Printmakers around the World:

I am delighted to present *The California Printmaker*, our yearly journal filled with inspirational art and artists from around the world. I want to thank the committee who works tirelessly on this publication throughout the year yielding these stunning results.

The California Society of Printmakers, holding our place in the virtual world, has developed programs many of our members have participated in with great excitement.

Thank you for the many hours of volunteer work creating robust platforms enabling our membership to present the full breadth of their talents on our website. We hope to have 100% participation by next year and look forward to seeing more profiles and videos of you in your studio space. While some of our in-person programs such as Residences were sidelined due to Covid-19, we expect to be back in full swing by end of Summer/Fall 2021. Stay tuned!

Several Board members past and present juried in 18 new members to CSP this year. The work was strong and presented beautifully. A hearty welcome to all of you!

Finally, thank you to our volunteer Board of Directors for all you do for CSP every day, awake and in your sleep! This has certainly been a year of incubating programs and developing interesting ideas in this most challenging year. Our board meetings are filled with endless ideas to keep our membership engaged and stimulated.

I applaud all of our members for continuing to attend your stream of creativity, constantly showing me just how talented and beautiful you are.

Your Devoted President,
Jami Taback

NEW MEMBERS

Portfolio Review Winter 2020

Christina Altfeld
Kelly Autumn
Megan Broughton
Israel Campos
Matthew Hopson-Walker
Barbara Jacobs
the Mayor
Megan Pater
Deborah Rantz
Dora Lisa Rosenbaum

Portfolio Review Summer 2020

Jared Barbick
Teralyn Brown
Austin Buckingham
Babette Cooijmans
Joseph Kohls
Vicki Nakamura
Janis O'Driscoll
Karen Baden Thapa



A COLORIST: ONE THAT COLORS OR DEALS WITH COLOR

Edda Valborg Sigurdardottir

I grew up in Iceland, an island in the north Atlantic Ocean. After I have been away from my country of birth for decades, except for several vacations through the years, I find myself returning to memories of the landscape in my art. The forms, the colors, the vastness of the horizon; the unobstructed field of vision as far as the eye can see give me a sense of freedom and deepens my breath.

Color of the landscape is directly tied to weather. The skies are big and the clouds are dramatic. The sky can be deeply gray or brightly blue. Ocean, mountains, black beaches and grassy hills can be vibrant with a clear sky or dreamlike in darker, rainy weather. Ever-changing light enhances or diminishes the colors and forms of the mountains, cliffs, fields and rocks.

The ability to see far and wide is to me like taking a deep breath, as it allows me to take in the views. My work with color in various prints attempts to enhance the mood of the natural landscape and to bring out the character of the land, creating foreground and distance.

To capture moods and atmosphere, blending of colors is essential. I start by setting up my table with the containers of colors in a specific order and work from there. Akua intaglio water inks work well for me. Using the monotype print medium, these inks give me a feeling of painting. Hansa yellow, pyrrole orange, crimson red, ultramarine blue, carbon black warm and the Akua transparent base

all line the left edge of my work table, in that order. From these colors I blend my shades and tones and find my way to the color I am after. Using the transparent base is imperative. I like to run my paper often through the press, creating a lot of layers as I build the image. Overlapping colors allows further blending on the paper, further creating new colors and shades. I rarely use a color unchanged but if I do, it would be only once in my print.

Adding a smidgeon of another color, even just a drop on the corner of my palette knife will give it a hint of a difference, fulfill my vision of where I am heading.

Most often I start with very light colors with a good amount of transparent base. This acts as my underpainting, and that way I can roughly create the shapes and composition of the print. Thereafter, I start to build the colors one on top of the other, allowing them to blend where I want, overlap or leave an open area.

For example, when blending my inks to produce various shades of blues, I add the ultramarine blue, a bit of red and black and finish off with some transparent medium until I can feel the right color has been born. This may be the first application for a dramatic sky or a mountain in the distance. Layering parts of that blue with a new blend intensifies the drama I want to appear in that section of my image.

The brayer is my best friend, as is the wonderful wiping cloth, when I work in the monotype print medium. I use the cloth to create sharp edges by wiping the ink after application to the plate, or I use my fingers to give the edge a softer feel. I often use the brayer to create streaks that enhance certain areas, giving a painterly effect and sometimes an accidental outcome that makes me smile.



This article focuses on a series of ten monotype prints created in 2018, that fit into a handmade portfolio case. I named the series *Iceland Horizons*.

As I visualized this series, I felt it may have been a blend of the designer in me and the fine artistry I strive for as a printmaker. I wanted to create the vastness of the horizon of Icelandic landscape, capturing the visual experience of standing on the top of a mountain after a worthwhile hike and being able to turn slowly, but surely 360°, inhaling the view.

I wanted to make the work look and feel painterly by showing accidental marks and texture. Thus, I chose to create these works using monotype as my print medium. Working in monotype gave me more of the mood I was looking for in this work. As inspiration, I used photographs I had taken on numerous visits to Iceland. To accentuate the view of the horizon, I chose a format that emulated it—wide in length and narrow in height, resembling the way one sees the skyline in real life. The prints measure 22" wide and 2.75" high (plate size: 22" x 2"), printed on Arnhem paper.

I used only one PETG plate (PolyEthylene Terephthalate Glycol, thermoplastic polyester) for all the prints, scrubbed it clean between each new print and reused for my next print—no waste! Akua water-based inks were used in all the prints, and I found that these inks gave me the texture and transparency I was looking for. I did not count, but each print received numerous layers of ink; thus it was challenging to register the long and narrow plate onto the paper before running it through the press.

Understanding human response to color, and its effects on the viewer is important in fine art.

I wanted to express and highlight the forms and moods in the landscape and skies with colors that implied a feeling of the viewer actually being there. Use of color helps us to realize how we see and feel nature and our surroundings.

Casting our eyes across a moss-covered lava field in the foreground to the blue mountain range in the distance revealed the color plan. In the image, *Austfirðir*, at the top of this page, the darker browns and blacks with a hint of green emphasize the shapes and shadows of the forms in the foreground. In order to reinforce the blue mountain range with a hint of cold white snow on the tops, I used a blend of metallic silver with transparent medium which glistens slightly when the light falls on the print in a certain way. This is my way of making the print come alive.

In lower image *Dyrhólaey*, the overall palette of black, grays and blues in the cliffs against the ocean and sky, with a silhouetted human figure in the foreground, creates a dream-like stage. The blues and grays almost run into one another at the edge of the horizon granting the light to act as a subtle division of sky and ocean. I created the appearance of light by a very delicate application of color and medium that made the color transparent through to the paper.

Influenced by the luminous sky and sometimes the gloominess of the advancing rain clouds, the small islands off the coast lay oh so still as the outlying sky threatens rain. In the image *Hornafjörður*, on the top of the following page, the blues reflect from sky to the still ocean surface in



all its variety of hues. Yet the glimpse of sunlight, using a hint of yellow blend struggles through to give us hope.

Color can express aspects of weather patterns and drastically alter what we see. Far in the distance, the darkness of rain is falling above the mountain range, but we stand among the green rolling hills in the foreground in awe of the view as in *Klausturfjall* the lower image above.

My inspiration for the case I built (page four), holding the ten prints, came to me as I thought of explorers from centuries ago traveling the vast land on horseback. Maps and journals were important to document their expedition. The case is clad with a detail of an actual map of the highlands of Iceland, tied with a linen ribbon. The inside of the case is covered with handmade paper, reminiscent of the bright blues representing the heavens, the distant mountains and the ocean. I visualize the case sticking out of their saddlebag, holding important references to their journey. The encasement is an important part of this series of work, and the prints fit snugly into the case.

Currently living in western Massachusetts, my surroundings are vastly different from where I grew up. I sometimes find that trees suffocate my longing to see far and wide; however the multiple of greens nourish my vision—just in a different way. As I walk out of my door and admire a nearly 150 year old Black Walnut tree, majestically growing before my eyes, I see it in a revived way each day. The change is encased by color—so many greens! The sky, the light, the movement by the wind mesmerize my eye and my brain. This is an identical effect as when I grew up at the seaside. The multiple blues of the ocean and mountains yonder give a distinctively altered view and feelings. Each day is different.

Nature is so generous to the eye; particularly to the perception of the visually inspired. Endless shades, saturation, transparency and alterations by movement and distance are some of the aspects I strive to create with color in my prints.

Artist Information

Edda Sigurdardottir grew up in Iceland, which had a tremendous effect on her art and her sense of visual delight, color and form. It was a landscape of mountains, waterfalls and rivers, lakes, flat lands, volcanoes, glaciers, black sand and unobstructed views. She moved to the US in the 1980 and was a successful graphic designer, then worked full time in fine art and printmaking. She is a member of Zea Mays Printmaking studios in Florence, MA. In the fall of 2018, Edda's work, *Iceland Horizons* portfolio, was accepted into the *Editions/Artists' Books Fair* in New York City and acquired by the New York City Library's Special Collections. Edda is a member of the Boston Printmakers, New England Monotype Guild and the Oxbow Gallery in Northampton, MA. She works in monotype, silkscreen, intaglio, photopolymer gravure and photo etching.

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Image Documentation

Austfirðir print with *Iceland Horizons* portfolio case, 2018

Austfirðir, Monotype, 2" x 22," 2018

Dyrhólaey, Monotype, 2" x 22," 2018

Hornafjörður, Monotype, 2" x 22," 2018

Klausturfjall, Monotype, 2" x 22," 2018



LAYER UPON LAYER

Roy Willingham

My desire to create rich depth and range of color in my small-scale relief prints has been an enlightening and educational journey.

Using color is completely intertwined with my interest in landscape and how it is represented. It all started with a bunch of postcards. In the 1980s I began collecting tourist views of Italy, in particular, examples of very obvious retouching: luminous blue skies, glowing orange roofs, unfeasibly green trees. This led me to create a series of ten single-block reduction linocuts in homage. The wide spectrum of bright colors was quite a challenge for single-block prints so I originally planned for about ten layers of color per print. I wasn't far into the series before I realized something that I later learned is a general rule for my work: however many colors I initially plan to use, I will always end up using more. With these early prints the extra colors usually comprised corrective layers but, as my planning and color mixing have improved, these additional layers instead reflect a desire to add more complexity to the prints.

The main problem I had with these linocuts was getting vibrant highlights in contrasting colors to areas of the image where I had already cut away the relevant parts of the lino. So I "cheated": in a similar way to the postcard creators touching in highlights, I added mine in collage, using tiny pieces of paper painted with gouache or watercolor. Not that I really considered this cheating: artists are free to do whatever they like with their work to achieve the end result they require.

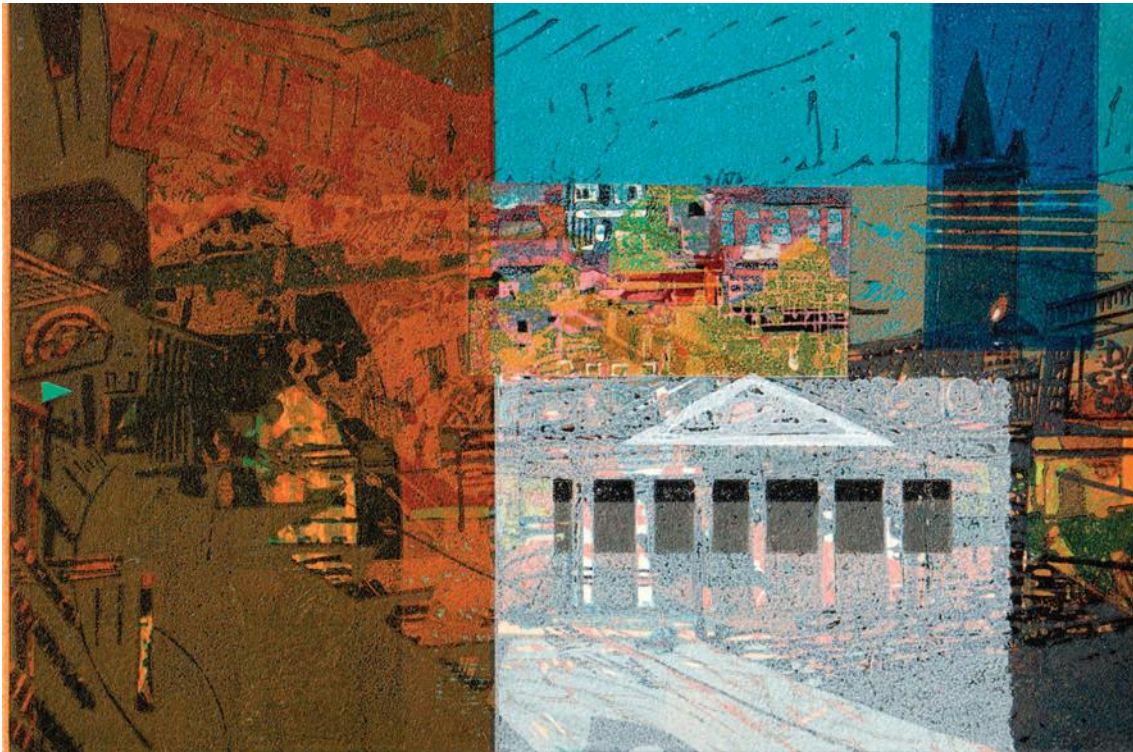
While I was working on this series I had printed plenty of extra copies to allow for a reasonable number of failures. I then had the idea that I could use these for a further series which I called *Travelogue*. The intention was to mix different blocks printed on each print to create images that would be a blend of the assorted locations, as if the

memories of particular places were becoming muddled in the viewer's mind. Because I wanted to refine the compositions, I cut a second series of blocks for additional possibilities in the overprinting.

Starting from a baseline of multiple colors rather than the white of a clean sheet was an interesting experience. As I tended to work mainly with transparent colors, each additional layer added to the complexity of the print and produced a rich quality I had not achieved before. I began to wonder how many layers one print could physically take. Each print routinely had up to about 25 layers of ink. I should add that I work with oil-based inks so there was also the question of how well the layers would adhere once the absorbency of the paper had become completely blocked. In one print I overprinted with about six layers of white to see whether I would be able to distinguish the cutting on one layer from the next. I found that I could! I was left with a lovely subtle range of close toned colors in what has become one of my most popular prints.

In trying to break away from flat areas of color, I started to mix up blends on the roller so that I had graduated colors across a part of the print. I was also experimenting with hand-wiping and other interventions to the color on the block before printing, as well as manipulating the color on the prints themselves. It was while I was stippling color into a masked-off part of one image (to rectify an error) that I realized that pochoir would be an ideal way to resolve the problem of how to get tiny areas of contrasting color into a print without cutting whole new blocks for that purpose. Having played with this pochoir technique, I also found it an ideal way of fading colors in a confined space much more easily than trying to make a blend with a roller. Enter the stencil.

I love working with stencils whether I am using multiple blocks or making a reduction print from just one block. I use stencils to define areas for printing and also to prevent areas from printing, such as cut-away portions of a block.



My favorite stencil material is a 40 gsm glassine which facilitates a long print run without any bleed-through of ink. It's thin enough to get a clean edge and transparent enough to lay over a print to trace areas that need to be defined before a stencil is cut.

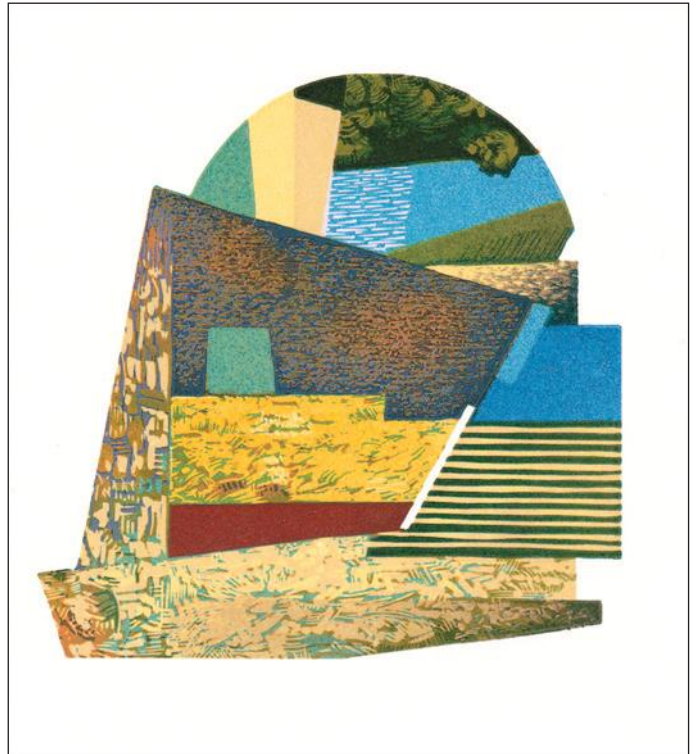
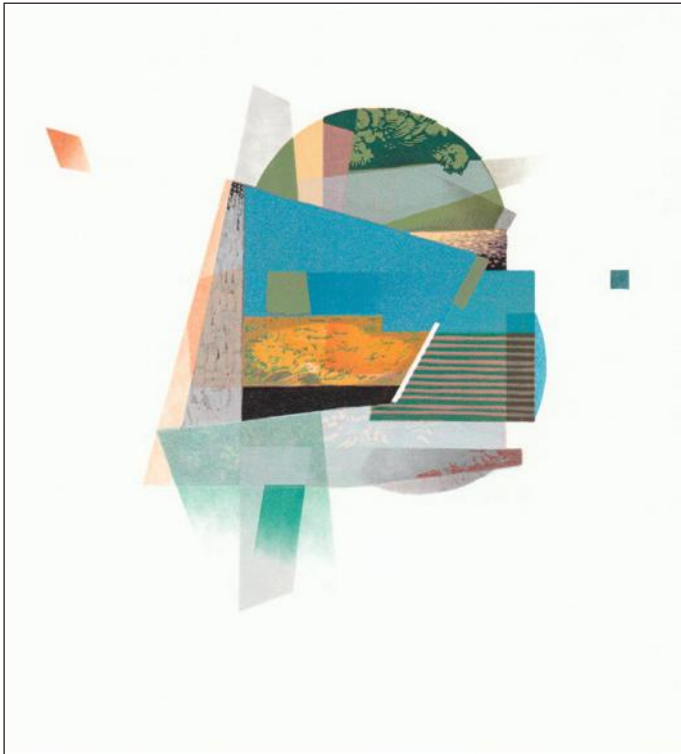
Stencils open up the possibilities of so many more colors, doubling them per layer so that, by the time you have printed four colors, you can potentially have eight on the print. Using them also means more flexibility when cutting a reduction block. You can choose whether an area is better dealt with by cutting away more of the block or by using a stencil. The main difficulty is that of trying to conceive in your mind's eye the effect of the next layer on the numerous colors already printed. I have used up to 50 colors on a single print but, since I may select small areas for some colors, I would expect that most areas of a print would contain only half that number.

I have been having great fun recently overprinting transparent secondary colors to give some very interesting color combinations. I am now mixing opaque and transparent hues in my linocuts with areas of flat color set alongside textured cutting in order to achieve a richness of surface and expand the variety of contrasts. I have also started making work using printed collage. This started with my desire to minimize waste by recycling leftover proofs. These and failed prints can form the basis for collage material and I now use them to clean the residue of ink from my rollers when cleaning up and to produce monotype textures from the leftover ink on the slab. In doing this, I have acquired a selection of unique sheets

which I keep or overprint with lino blocks ready for use in other works. By this means I now have a new range of textures and colors that I wouldn't have found from more traditional printing methods.

When I am choosing colors for a print, the palette is often initially defined by sketches but usually I will also have an idea in mind about how the colors will look in a final print, which may be based on a certain light effect or atmosphere I want to convey but could equally be colors that I instinctively feel would suit the location. Often, I will come to associate a particular set of colors with a certain place and find that, if I do further work based on the location, the same hues will tend to reappear.

Many people are surprised at the quantity of colors I use in a single tiny print and yet, if they were to consider this relative to a painting, there would likely be a far wider range. Understandably, there is a desire to be economic with the number of printing layers, a delight in achieving the result with the minimum of process, something akin to the neatness of producing a mathematical equation. And yet, why not be indulgent? I cannot resist the temptation to add just one more color to get closer to the subtlety I want to achieve. I would be the first to admit that, in retrospect, I could have chosen to omit a color or two along the way but, had I done that, I might also have missed out on discovering a new color combination that appears halfway through the process, only to have disappeared again in the final print. It's all part of a continuous learning process and who knows which of these experiments may just prove vital for the next piece of work.



Artist Information

Born in Southampton, I now live in London where I studied at Central School of Art. I became a member of the Royal Society of Painter-Printmakers (RE) in 2013. I have been a member of the Printmakers Council since 1981.

I have exhibited in many open exhibitions including Xylon, group shows with the RE, the Society of Wood Engravers, Printmakers Council and internationally in Holland, Russia, Italy, Japan, Sweden, Canada and the USA.

Among various prizes, in 2015 I was shortlisted for the Jerwood Drawing Prize and in 2017 was runner-up for the Flourish Print Prize. My prize-winning book now sits in the Bodleian's Rare Books Collection. My work appears in various publications and my prints are in the public collections of the V&A, Fitzwilliam, Ashmolean and Scarborough Art Gallery.

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Image Documentation

Hortus Conclusus, Unique artists book, centre page spread, folded up to form walled garden, collaged pages of linocut, monotype and rubber stamps, 5.5" x .5" x 1," 2019

Travelogue No 8—Recondito ad Ogni Ora, edition of 4, linocut with collage, 6" x 4," 2011

Volterra Dub, edition of 12, linocut and pochoir, 5.5" x 6," 2020

Volterra Arch, edition of 12, linocut, 4" x 4," 2019

Southwark Arch—Expansion II, linocut & pochoir printed paper, card and wood construction, 7" x 6," 2018



COLOR AS MEMORY

Emily Ketteringham

I have known since I was a teenager that I see color differently from many other people. Walking with friends on Army land near my home, I remember stopping and pointing out the beauty of the varied bands of ochres in the great expanse of rutted sand in front of us, only to be met with bemused faces and their response of “it’s just yellow.” It is only in the last few years that I have realized that my memory also works differently from most people. I have Aphantasia, a “lack of mind’s eye.” What this means is that I can’t hold images in my mind, so I have little visual memory or imagination. The memory of the Army land is a factual one, there are no visual images accompanying it; although I walked the area for years, I couldn’t describe it to you, other than an overall impression of color.

In my early screenprints I tried to create the images I wanted by using as few colors as possible, using overlays as a way to create secondary colors and limit the number of layers needed. It was only when I realised that I could give myself permission to use as many colors as I wanted, a totally freeing concept, that color became so important in my work. I was no longer trying to force the colors to do what I wanted them to, I could let them be free and see how they behaved. This change in working method altered the type of images I made and my work became far more abstract. Color became the focus of my printmaking.

In 2018 I went on a 2 month road trip around Western Australia to indulge my love of rocks and huge landscapes. From the striped reds, oranges and greys of the gorges, the horrifying beauty of enormous multi-colored open cast mines, vivid yellow wildflowers, and the constantly

changing hues seen from the new perspective of a camper-van as we drove along endless single carriageway roads, I left, feeling saturated with color. Back home in the UK, I knew that I wanted to create a body of work about the colors I had seen, but I couldn’t conceive of how to approach it. The photos I had taken didn’t do justice to the vastness of the landscape, so how could a print? Added to which, the effects of Aphantasia mean not only could I not remember what I had seen without looking at photos, but also I couldn’t visualize how a piece would look until I had actually made it. I couldn’t see how to start. I didn’t want to make representational work as my brain doesn’t work that way, but more abstract ideas refused to resolve themselves.

After a year of false starts and disappointments, I gave myself permission to NOT make work about my trip, and the next day I finally realized the answer was to use my Aphantasia as a tool, instead of seeing it as a negative frustration. Rather than trying to make work about entire landscapes, I would focus on small scale, specific places or moments that I had captured on camera, and that had color palettes that had lodged somewhere deep in my faulty memory. Instead of large stylized landscapes, this way of working has resulted in two styles of more intimate, abstract landscape prints.

My circle prints are an experiment to discover whether if by deeply studying a particular photo, I could consolidate my very tenuous memories. I chose to work from photos of moments that had made a significant impact on me during our travels—a walk at sunset on the way to Karijini National Park; driving past burnt trees near Durack; the view from a wildly extravagant helicopter flight over the Bungle Bungles in the Purnululu National Park.



By focusing on a specific circle within a photo, I am containing part of that vast landscape, selecting an area to analyze in detail, rather than being overwhelmed by the whole. Each print starts as an exercise in planning, studying the photo and the colors within it, especially the colors that touch the circumference of the circle. I make a tracing paper plan, dividing the circle into sections, each segment representing the dominant color of that section on the circle's circumference. As it is unclear where some colors end and others begin, some parts of the circle are allocated two, three or even four colors. This plan is then used as the starting point for my print. I choose a focal point for each circle (in the case of the Cheela Plains photo it was a patch of yellow orange flowers, for the Durack print it was the "v" between two hills), turning the divisions on the circumference into wedges of color which can be printed in carefully color matched inks. As I use very thin, translucent inks, where more than one color overlaps, new colors are created. I love the discipline of mixing exactly the right colors to match the photos, and then relinquishing control by overprinting multiple layers and seeing what new colors are created—it is as though colors hidden in the landscape are revealing themselves.

Now when I look at my print *22°57'8.0"S 116°58'53.7"E* (titled to pinpoint the exact location of the original photo), even though I still can't visually picture the place; I can remember the walk up the hill to where I took the photo; that there was a giant lizard under the toilet block; and that when our camper-van made a funny noise in the morning, two very rugged Australian men crawled underneath it in the morning to fix it—all things that I had previously forgotten. So within these circles I have found a visual language that is an expression of the joy of colors within

the landscape, as well as allowing that color to work as a bridge to my own memories.

My pixel prints, in contrast, are more about exploring how memory breaks down. The pixelation of the images refers to the breakdown of memory, my attempt to hold onto an image that keeps slipping through my grasp.

Most of each image is printed in CMYK halftone. Screen printing in this way creates a wonderful range of colors, but can alter them somewhat from the original image. By using larger than normal halftone dots for the size of the image, this color inaccuracy is exaggerated—the deviation from the original photograph, which is itself an imprecise representation of the actual landscape, becomes greater—the image changing, as memories change with the passing of time, or places get mixed up. Within each of my CMYK images, a number of the squares are printed in clear spot color. These are the hints of color that speak of my only real memories. In Cape Leveque (print *16°25'47.4"S 122°56'28.9"E*) I drove through a small wildfire smoldering at the side of the road—there were tiny flashes of orange flame, an especially bright green leaf amongst the charred undergrowth, beautiful shades of grey in the smoke. These are the colors I have chosen to pick out in spot color, little fragments of memory that persist whilst all else is broken down.

For me, working on these prints has been an aide-mémoire, helping me to hold onto my Australian adventure just a little bit tighter, consolidating memories and helping lost memories bubble back up. Though I still can't visualize the places I have been, I feel more connected to the ones I have turned into prints. They have also been a creative and technical challenge, helping me to develop a visual language that I am continuing to explore. But above all

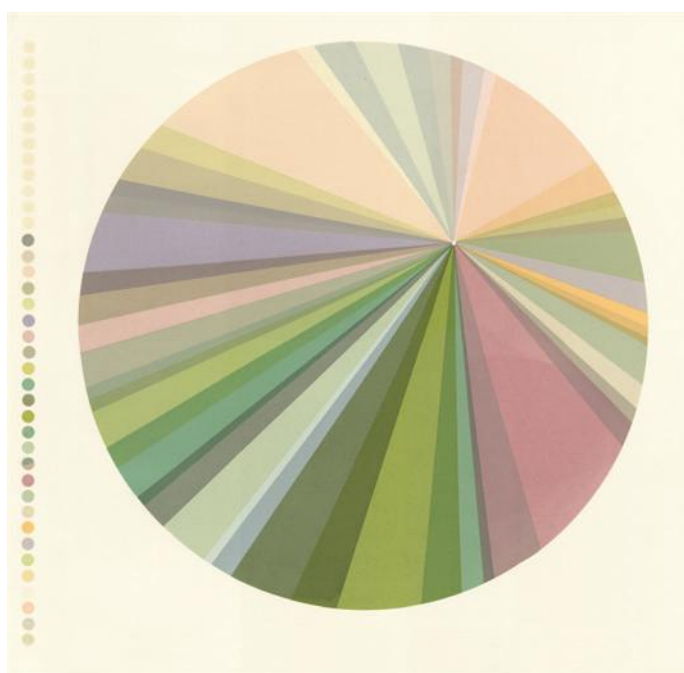
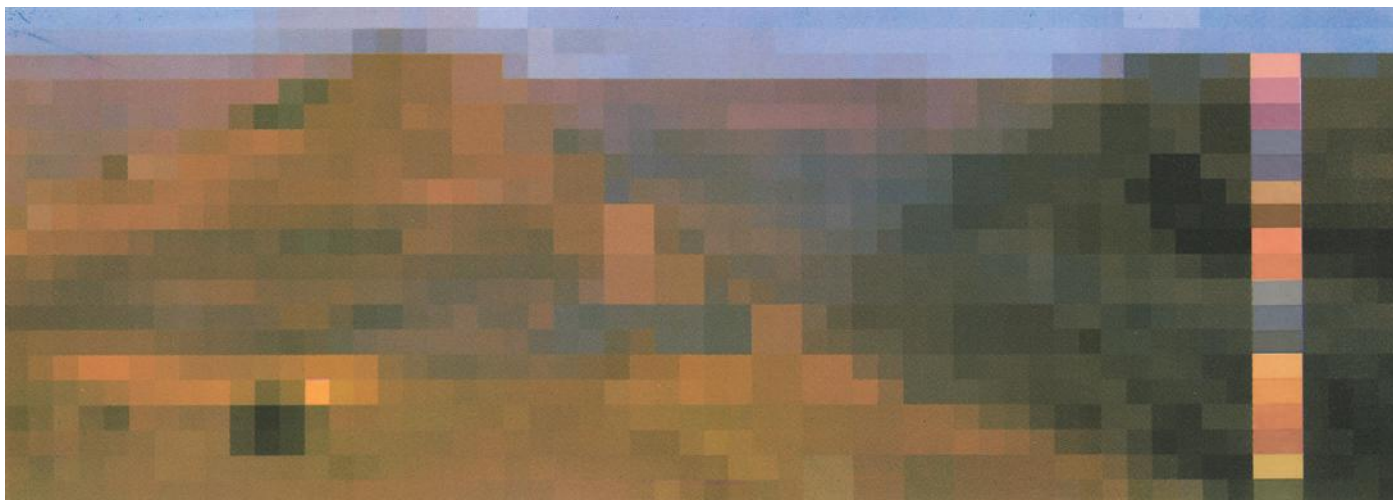


Image Documentation

Burnt trees near Durack, mobile phone photo inspiration for $16^{\circ}13'01.5''S$ $128^{\circ}21'54.1''E$, 2018

$16^{\circ}13'01.5''S$ $128^{\circ}21'54.1''E$, 27 layer screenprint, 21.5" x 21.5," 2020

$16^{\circ}25'7.4''S$ $122^{\circ}56'28.9''E$, 20 color screenprint, 14.75" x 22," 2020

$23^{\circ}21'29.3''S$ $119^{\circ}41'36.9''E$ (Mount Whaleback Mine), 23 color screenprint, 14.75" x 29.5," 2020

$22^{\circ}57'58.0''S$ $116^{\circ}58'53.7''E$, 20 layer screenprint, 21.5" x 21.5," 2019

Mobile phone photo inspiration for, $22^{\circ}57'58.0''S$ $116^{\circ}58'53.7''E$

they are a celebration of color, about stopping and really looking at color, seeing the huge variety that is there, letting it fill you up and be all there is.

Artist Information

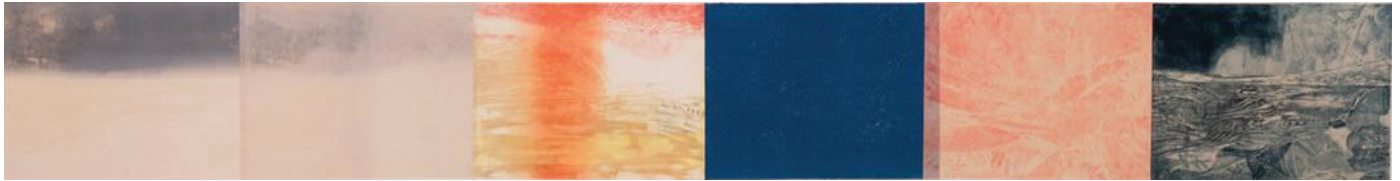
Emily Ketteringham is a Bristol screenprinter. Emily has a BA (hons) degree in Wood and Metalwork from Brighton University. She started screenprinting in 2006 when she took an evening class in general printmaking. At the time she was working as a full time Art teacher in a local secondary school. She left teaching after 12 years to become a full time artist, and in 2015 was awarded a distinction for her MA in Multidisciplinary Print from the University of West of England. Emily has had a studio at Centrespace in the heart of the Old City and is a member of Spike Print Studio.

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COLOR AS AN ENVIRONMENTAL INDICATOR

Elizabeth Rose

My practice as an artist begins with the study and research of parallel places and ecosystems. I observe and identify how they mirror each other's function and form, and how, through their similarities they are able to exhibit uniqueness. Studying these sites is especially important in the face of climate change, as highly sensitive places like islands and alpine areas become more vulnerable to fluctuating temperatures, rising lake and sea levels, which in turn impacts the survival of flora and fauna in these vulnerable landscapes. Awareness of the presence of indicator species demonstrates the geographic range of ecological connectivity, as well as indicate the zonal shifts within a warming climate.

Through my use of color within the process of working with multiples, I am able to highlight features within a specific environment and to represent changes and variations in temperature shift. With the onset of climate change, we are already witnessing an increase in warming trends, especially affecting high altitudes in mountainous regions. My work, *Habitat and Loss of Ochotona princeps* uses color to focus on the effects of heat on the highly sensitive American pika. Pikas are indicator species, a species which signals dire change is occurring within a

specific ecosystem. American pikas require year round snowpack and cold altitudes. The warming of the climate has already directly affected the American pika, with its disappearance in some of its former habitat in high altitude locations throughout the American west. To better illustrate this concept, I chose to use fluorescent color in a largely black and white piece, as an environmental indicator in a historic habitat range.

As an artist working with environmental topics, I often read scientific research pertaining to the themes I am working with. Referencing charts and graphs created for various research, I am intrigued by the colors used to illustrate various research and current developments. Using ideas generated within science communication from graphs and data sets, I build my own version of color charts to use when I create my work. First referencing my piece, *Place Shift*, a set of nine prints made from the same matrix size, I reworked *Night Form*, a mezzotint, which served as a catalyst for a new suite of prints. I altered the outcome of the printed matrix by working with methods such as chine collé and stencils. Employing photolithography, risograph and relief, I began to generate work in color using other printmaking processes from this singular matrix.

Within a single piece I will often use color to reference temperature changes within an environment. I began directly referencing temperature as color after I participated in the outpost residency with Signal Fire on Mount



St. Helens. Surrounded by such obvious physical alteration, it was impossible not to think about climate change, forest fires, heat, and temperature, while observing the impacts of huge deposits of ash in the surrounding region. I considered how the earth around me was literally heating up, boiling, and going through a cycle of eruption. Bearing witness to the aftermath of such an event, infused the idea of application of color as temperature into my work. In *Blown Off*, I chose to use fluorescent and warm tones: hot pink for the largest increase in temperature, and used varying shades of orange to suggest urgency.

The central focus of the works comprising *Place Shift*, is a singular form, repeated throughout the piece to depict the removal of the physical area of land over a period of time. This landform is being removed in different ways, abruptly in hot pink, showing the inflamed surface of the ground and how it disappeared. I used stencils as a tool to illustrate the absence of the top of Mount St. Helens, a similar form to the work I created using the same matrix depicting an iceberg in Newfoundland. In both cases heat removes the form. Lava and pressure generated high impact friction, thus warranting use of bright color. The slow melting process of an iceberg over time inspired softer tonalities in pinks and reds, used in the second iteration of *Night Form*.

I used a similar strategy when creating *Bunchberry* (*Cornus canadensis*) on *Three Islands*. This work features bunchberry a plant found on three islands located in three different places. I used warm tones to indicate attention and

try to draw focus. I also use color to illustrate the change in light during the time of day, referencing the moment before it's completely dark at night but not quite dusk anymore, when there is a rich dark blue hue in the sky before it changes to the gray-black-purple hues of deep night. I used these colors to highlight the difference in my work *Lineation* and *Lineation Dusk*. I employed this idea and drastically altered the work based on my application of color.

My work is informed by ecological patterns shared along northern latitudes in the United States and Europe. This work relates my use of the multiple through printmaking to patterns of species distribution in flora and fauna found along different sites in northern latitudes. I am interested in how these distributions can be conveyed through print media processes and changes exhibiting various colors to help reveal similar habitats which have existed and have subsequently receded or shifted over time. An example of work relating to this topic is my piece, *Sarracenia purpurea* (Purple Pitcher Plant) and *Bog Habitat, Newfoundland and Labrador*, which documents *Sarracenia purpurea* in its bog habitat. Inspired by range maps of *S. purpurea*, through my work I seek to amplify the importance of connected habitat, as well as highlight the dislocation and habitat fragmentation which continually takes place in relation to forests and broader ecosystems.

I also used color to represent changes in atmospheric conditions. I used dayglow colored fluorescent colors in the work *Altitudinal Zones* and *Latitudinal Zones*; these



and glacial movements examining cross cultural connections in our mutually shared landscape and world. Rose's work was selected for publication in *25 Under 25: Up and Coming American Photographers*, Vol. 2. She has been an artist resident on Mount St. Helens National Monument, Terra Nova National Park and with the Absaroka-Beartooth Wilderness Foundation. Her work has been supported by the Southern Graphics Council International, the Mid America Print Council and the Matthew Hansen Endowment from the University of Montana. Rose was a recent fellow of the Fulbright Program based in Krakow, Poland.

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Image Documentation

Sarracenia purpurea and Bog Habitat, Newfoundland and Labrador, photo lithographs and archival pigment print with gold foil, 30" x 44," 2019

Latitudinal, installation of 6 intaglio monoprints with mezzotint and aquatint 18"x 140," 2019

Blown Off, intaglio relief, photolithograph, and risograph, 22" x 18," 2019

Night Form; mezzotint with spit bite and chine collé, 22" x 18," 2019

Submerged Layers, intaglio, relief, photo intaglio, risograph and monotype, 22" x 18," 2019

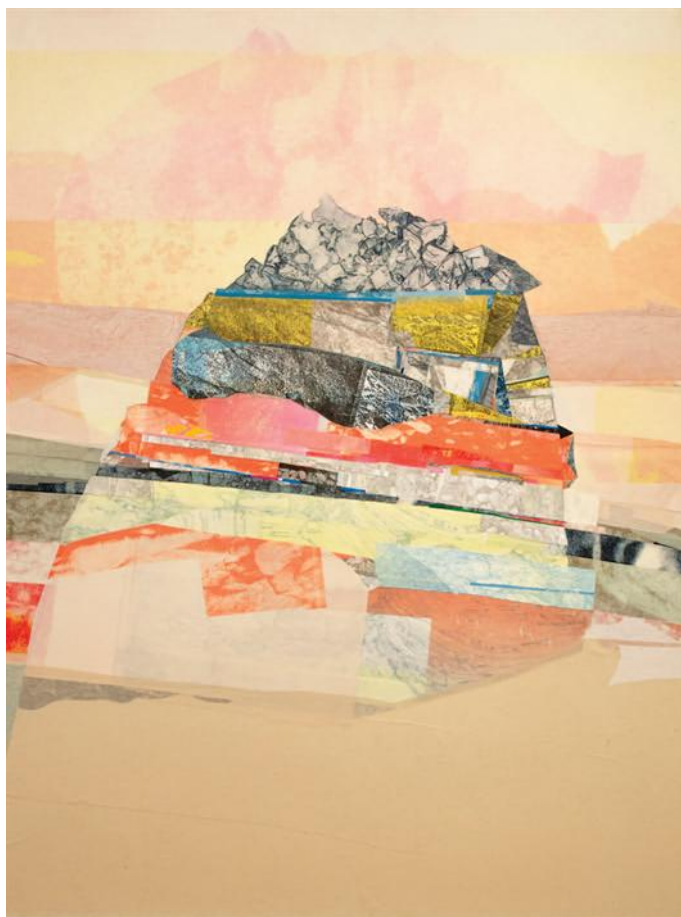
Altitudinal Zones, intaglio, relief, lithography, and risograph, 48"x36" x 1.6," 2019

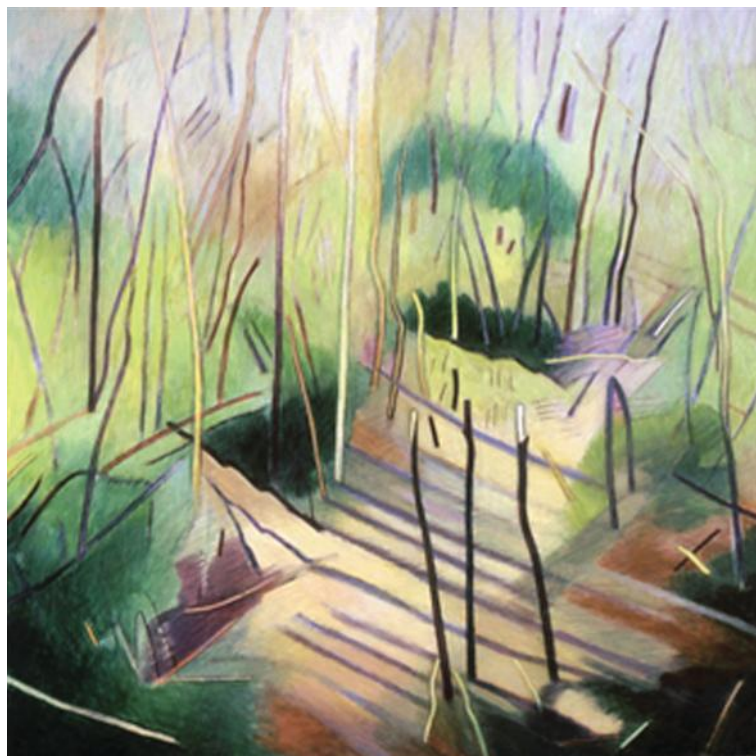
pieces reference the varying zones that occur within changing altitude and mountainous landscapes and environments. Referencing my own experiences traveling through altitudinal zones to alpine areas, and across latitudinal lines, I create work with color which connects geographically disconnected landscapes focusing on their shared ecologies: how each site is connected through climatic shifts, soil qualities and habitat range.

On a mountain slope it is possible to witness different phases of development in certain flora as you travel through different altitudinal zones. Inspired by data sets and color charts, my piece *Altitudinal* illustrates altitudinal zonation (or elevational zonation). It depicts climate zones which occur with elevation change on mountain slopes. The colors represent the layering of ecosystems and climate conditions which vary with changes in elevation. Similarly, I used this idea when I created *Latitudinal* which is latitudinal zonation. The colors represent temperature zones shared across one latitude. This same concept is present in the piece *Submerged* which references altitudinal zonation on a mountain slope as well as the layers of bedrock submerged in a rising sea.

Artist Information

Elizabeth Claire Rose earned her MFA in Printmaking from Temple University, Philadelphia, PA and a BA in Fine Art with a minor in Wilderness Studies from the University of Montana. Rose works with patterns of species distribution, range maps,





COLORED WOODCUTS AND EGG TEMPERA: A KINSHIP

Donna Day Westerman

Hans Hoffman said, “All paintings, representational or abstract, should be grounded in observed objects.” This is how I have approached my own work, with landscape as the object. Environmental changes, deforestation due to global warming and lately, wildfires close to home in California and across the globe are deep concerns. My work, then, has focused on profiling the landscape around me.

Over the last 10 years, my landscapes have evolved from close observation into a subjective shorthand of more calligraphic imagery. I start by drawing a representative linear image and then extract lines from my original drawing, freeing them from their confines, as I transfer them in reverse to a wood matrix. In short, in my reductive woodcuts, I find the abstract through representation.

Classically trained from an early age, I began my love of drawing at the Center for Creative Studies in Detroit, continuing at the University of Michigan. From there, I went to the Boston Museum School, where we painted at easels set up in front of the paintings at the Museum and learned all the techniques of the masters including egg tempera and fresco. I completed my studies at Otis Art Institute, under the heavy influences of Charles White and Rico Lebrun, the antithesis of my studies in Boston. While this range of training has played a big role in where I am now in my work, my direction has also evolved through teaching.

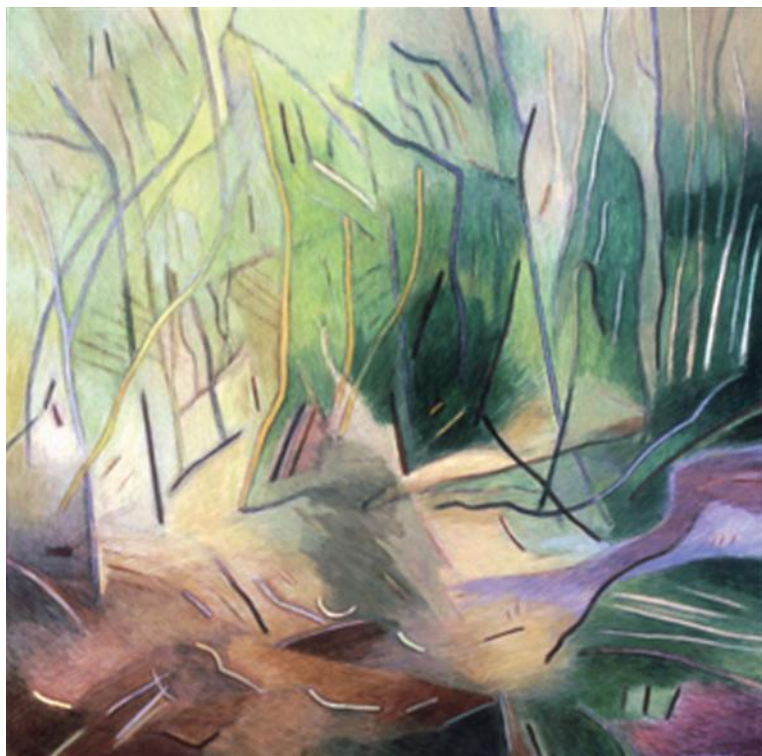
I was a full time instructor at Orange Coast College with a focus on painting and printmaking, which are

complementary to each other in important ways. In painting, I would emphasize hue, value and chroma, but the students fell in love with just the colors themselves, the hues. To develop their understanding of color, I encouraged them to study printmaking in order to translate their colored world into a wider range of values in black and white. Stretching value was always a goal in my teaching.

Printmaking was my primary practice through 35 years as a professor. In my coterie of printmaking friends at the Los Angeles Printmaking Society I was known as someone who was able to achieve deep blacks in my intaglios. I was always a fan of purely black and white imagery without *makeup*, as a friend has described colored prints.

Providing my students with firm grounding in a more sophisticated use of color was also important. In painting classes, to push chroma and explore color mixtures, I gave an exercise using green, one of the most difficult colors to use effectively. Often used out of the tube or can, it looks artificial. In addition, it is a middle value unlike yellow or purple, so tends to stay neutral by its very nature.

I instructed the students to make a grid with yellows, reds and earth colors across the top and blues and greens down the side. Each was mixed in the intersecting square, leaving space in that square to experiment with various percentages; then black or white was added to each mixture. I would then take the students on a field trip, looking at nature carefully from different angles and at different times of day, trying to achieve a variety of *greens* in paint. These would be pure color-field studies without the interference of subject matter, an important lesson that also strengthened my own work in both painting and printmaking.



When I retired, remembering the advice I had given to my students, I decided to experiment with egg tempera, not having used it since my early training. The appeal of color-field is also associated with calligraphic line, lyrical gestures and modulated hues with an emphasis on landscape. Egg tempera works best for those who enjoy process, discipline and a predilection for line. (That would be me!) It requires and develops expertise in color mixing as you can only mix small amounts of color at a time. For egg tempera I grind my own dry pigments with water and use an egg yolk as binder. The application of color requires many transparent layers of glazes done with cross-hatched strokes similar to the marks I make in printmaking. The techniques are complimentary in those regards.

In my reduction woodcuts, the fine, linear, hatched cuts I make (as a result of my love of wood engraving and subsequent egg tempera paintings) also develop modulated value changes within these colored layers. The egg tempera studies marked my transition to exploring colored woodcuts to the exclusion of my intaglio practice.

Transitioning to woodcuts over intaglio was pragmatic as well. I was moving to Northern California and losing access to acid baths at the college printmaking facility. Woodcuts are easily transported and don't require hazardous materials. It all made perfectly good sense, since I was in love with wood anyway and could carve in any location.

I use All Shina wood which is a Japanese boxwood from McClain's Printmaking Supplies in King City, OR (imcclains.com). I like this wood because I can order it in any size, both sides can be used, it can easily be cut across the grain and yet the grain pattern can show up in the

image. I buy most of my gouges from McClain's as well. The Japanese tools hold their edges well as do Flexcut tools.

My papers of choice are Somerset Satin, Rives BFK, Arches 88 and, for Japanese papers, Gampi and Aya. Although in some editions I have printed dry with Akua, usually I like the papers to be uniformly dampened.

Not only for transparent layers of color but also for ease of cleanup, I use water-based Akua intaglio inks mixed with Mag Mix and also transparency, successively printing by reduction method, in transparent layers. Up to six or seven layers in Akua inks are possible before finishing the print with oil based relief ink. Sometimes for the first layer I use gouache mixed with paste, freely applied as in a painting. Often I will print an under-layer in an earth color or grey, having first cut out the whites. This comes from my traditional painting background to tie everything together. I rarely if ever use color directly out of the can or tube and always use some transparency mixed in with each layer.

My registration method—*trust in flipping*. Although I have used a jig for very large woodcuts so I can line up the paper and carefully roll it down onto the inked block, anything under 22" x 30" I flip by carefully placing the inked block face down onto the paper and sliding both to the edge of the press bed. I use a large American French Tool etching press set at just the right pressure (to avoid embossment) for the board, the paper, mat board and one pusher blanket in that order. Recently because of the pandemic, I have been hand printing my blocks at home, still using the flip method, on my dining room table.

Even with experience I am never completely sure of myself. Thinking backwards using multiple blocks is a challenge.



The results in the different stages can be unexpected. In problem solving, a change of direction can occur. I have therefore subscribed to *wabi-sabi**. For example, three years ago, an edition of a large woodcut awaiting its third color mysteriously disappeared from the studio. As much of the wood had been removed in reduction, it lay dormant. This year I have at last been able let go of my first intention (as often happens) and am experimenting with an even stronger resolution; a mix of the old with the new.

* *Wabi-sabi* is a traditional Japanese aesthetic centered on the acceptance of imperfection and an appreciation of beauty that is impermanent and incomplete in nature. "When nothing is certain, everything is possible."

Artist Information

Donna Day Westerman, born and raised in Detroit, MI, is an artist-educator now living in Orinda, CA. She received her MFA in Printmaking/Painting from Otis Art Institute in Los Angeles in 1965. Later, as a professor and chair of the art department at Orange Coast College in Costa Mesa, she received honors for establishing (in 1979) the first Computer Graphics program in the nation within an art department. After a long and active affiliation as a board member with the Los Angeles Printmaking Society and upon retirement from OCC, she moved to Northern California and set up a studio in Oakland. An ongoing artist-in-residence at Kala Art Institute in Berkeley, she has focused her work for the past 10 years on woodcuts. Since 1960 her work has been shown both nationally and internationally and is in many prominent public and private collections.
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Image Documentation

Biltmore Forest, egg tempera, 48" x 36," 2008

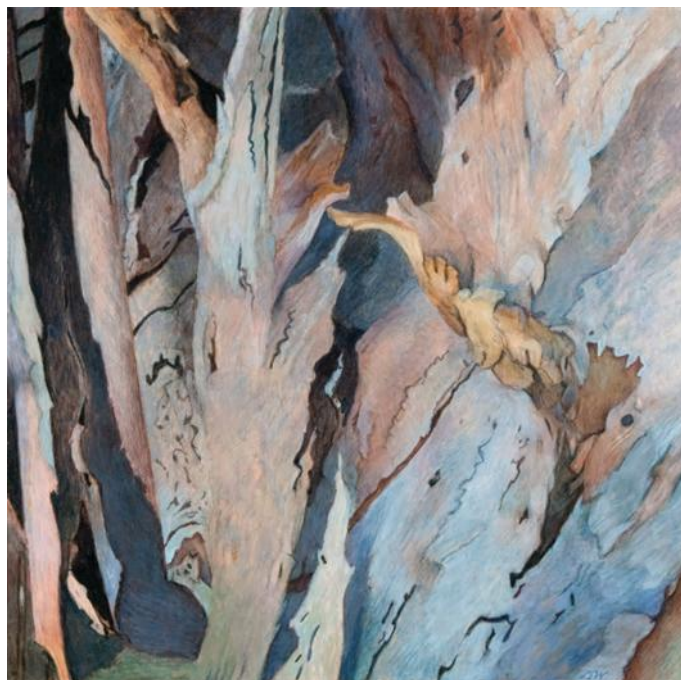
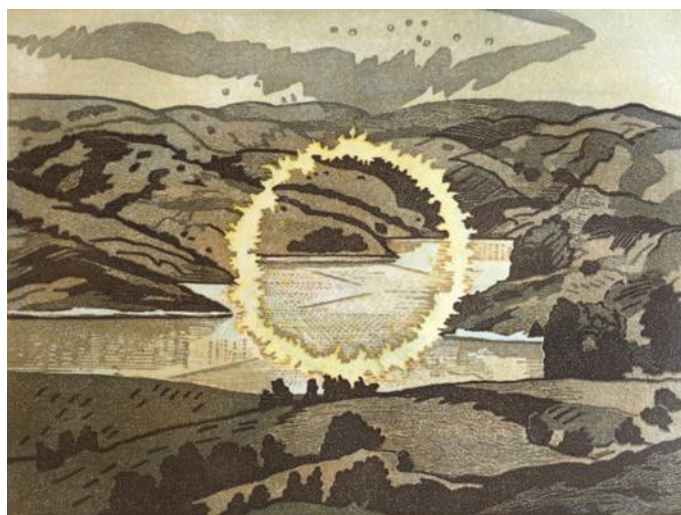
Diptych One: Color studies, egg tempera, 18" x 18," 2007

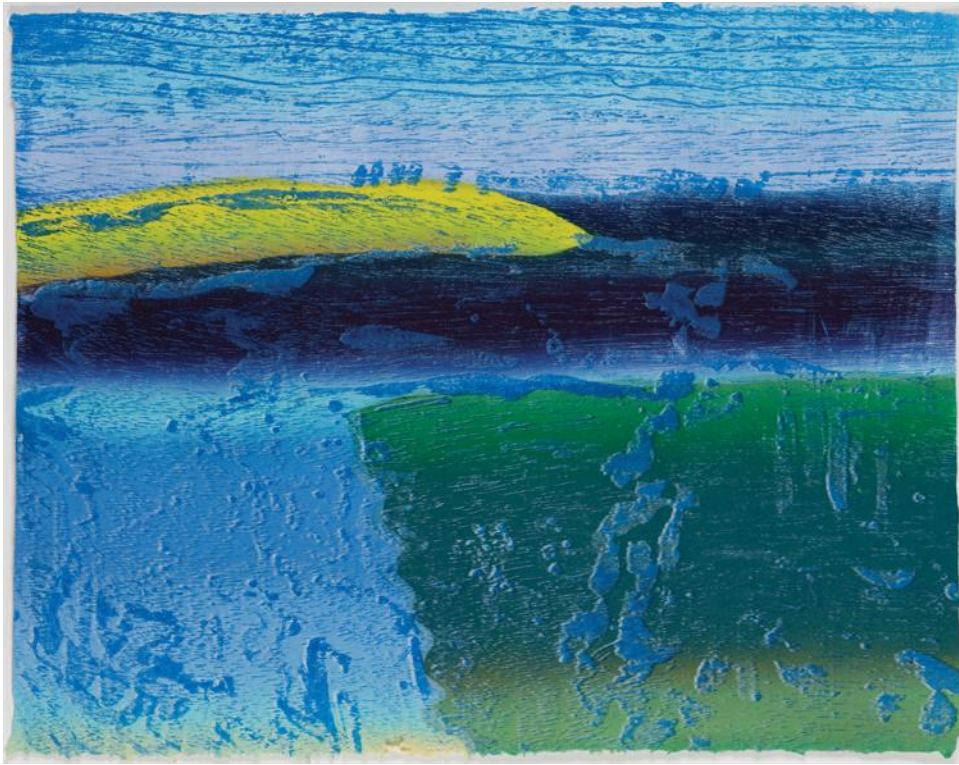
Diptych Two: Color studies, egg tempera, 18" x 18," 2007

Regeneration, reduction woodcut, 26" x 20," 2019

Garden Panorama, multiple block reduction woodcut, 12" x 36," 2017

Ring of Fire, Eucalyptus Bark, egg tempera, 8" x 8," 2015





A CONFLUENCE OF COLOR

Cathie Crawford

During my 35-year concentration on the color reduction woodcut, 2 words have defined my prints, *color* and *water*.

My color is achieved with elaborate blended or split-fount inking on a large litho roller and multiple brayers. I have always been enamored with the ever-changing hues of the landscape and “rainbow rolls” seemed to be the best way to achieve these effects. Why print one color at a time when you can print ten at once? Almost every run through the press involves a blended roll. Often more than one is applied with more than one brayer and/or litho roller.

I work reductively from one piece of quarter inch plywood as my printing matrix. The first run is usually background color printed before I cut any wood. In every print, I layer multiple blended or split-fount rolls of transparent ink in multiple runs. I love the unique color I achieve with several color inks blended on a brayer or large litho roller. I love the muted in-between colors achieved with this technique. I also use many Mylar stencils working pochoir. This allows me to extend the color possibilities of each reduction woodcut while working reductively within a given shape. While I may work reductively, I am building up layers of transparent color additively, with each run, to create a *Confluence of Color*.

I have been keeping a photo record of my process, run by run, for the past few years on my website under “How I Print.” My “sheltering in place” woodcut, *Anima Mundi* (soul of the world), is my best-documented image. It was completed in seven runs using Mylar stencils and blended

rolls of several inks for each run. I ended up cutting very little wood. This was intended to be the background color for my third Mokulito (lithography on wood). However, by the time I was halfway through, I was too thrilled with the resulting color composition to consider covering any of it up with a Mokulito matrix.

Water theme images have been a constant source of inspiration throughout my printmaking career. My fondest childhood memories involve growing up at the beach on Long Island, NY. I love the ever-changing colors of the beach and water. Naturally, many of my woodcuts involve a close-up view of a vibrantly colorful underwater or on-the-water world. Water is my place of replenishment and rejuvenation.

My more figurative work frequently involved 15 or more runs. In 2009, I added 21 runs per sheet of paper to complete an image. At this point, I decided I had gone a bit crazy. I was 60 years old that year and already feeling my age. I remember thinking, this is ridiculous! I need to find an easier way to make a color print. I now have been striving to pack as much color as possible in the fewest runs. *Spectrum* was completed in only two runs even though I planned it as three! The first run involved a blended roll on my litho roller of a tint of aqua, a dark green, a yellow green, a tint of blue, a bright cobalt blue, a lavender, a red, a yellow orange and two more reds. I printed the first run on an uncut piece of quarter inch plywood. I then cut away areas I wanted to remain those colors in the finished print. I love how one line or shape changes color revealing parts of my elaborate first blended roll. The second run involved very transparent colors on a



second blended roll. I started with a pure transparent base, then a peach, a bright green, a dull medium blue, a tint of gold, a purple and ended with a transparent base. I often use pure transparent base to get a fade away color. You may see the two blended rolls on the litho roller, the printing matrix and the paper in photos on my website.

In 2012, I found that my beautiful Natsume 4007, 24" x 36" paper with four deckle edges, was no longer available. The Japanese papermaker had died. I had been using this handmade kozo paper almost exclusively since 1986! I loved this paper because of the amount of ink it could absorb. This allowed me to have more layers of transparent color in each print. I bought up the last 35 sheets and found a few more on eBay. My favorite paper had become too precious to print editions on. So, I dug through my print drawers and started making non-objective monoprints out of old rejected or unfinished prints. First, I reworked an old block. I then tried printing other old blocks on top. For my *Pluvius* series of monoprints, I developed a staining technique to color the white areas of an edition print I never really liked from the 1990s. Each of the *Pluvius* series was "stained" with different colors of transparent ink and extra runs were printed on top from the reworked matrix in different blended rolls of color. This led my current direction toward increasingly non-objective edition prints.

This new direction is the converging of line, shape, texture and especially color in an ambiguous space that whispers elements of a colorful landscape. A wave at sunset evolved into *Breaking*. *Luna Sea* represents the color of a moonlit sea. *Noumena* is the opposite of phenomena. I am intuitively choosing hues from memory and imagination. I use color for the emotional impact. *Summer Soleil* is the very essence of summer, my favorite season of the year. I attempted to capture the color of sunshine on water in seven runs of transparent pastels. I have had a very happy and productive summer in spite of the worldwide pandemic.

In 2019, I decided to try the Mokulito process. After over 30 years of doing only reduction woodcuts, I was

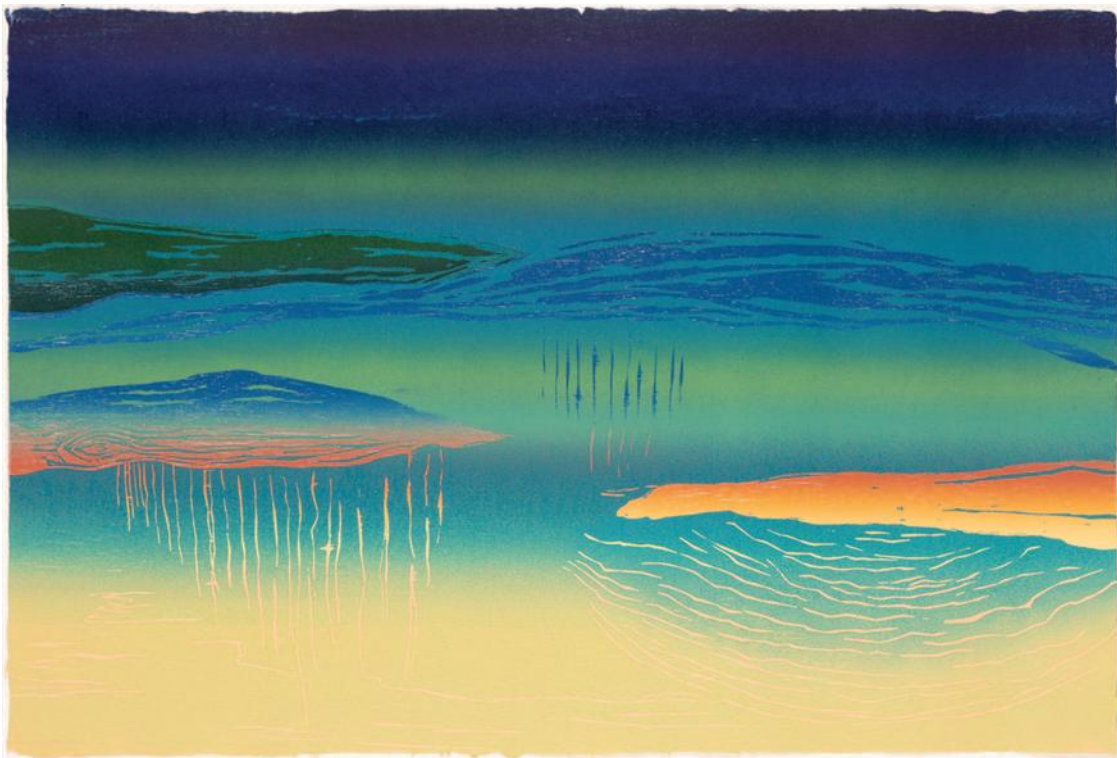
ready to try something new. Mokulito is lithography done on wood instead of the traditional Bavarian limestone. Mokulito, however, is much less stable and less predictable than traditional lithography. The edition will be small and variable. You must go with what you get and expect surprises. I had concentrated on lithography for many years before rediscovering the woodcut in graduate school. I missed the drawing quality of litho crayons and the beautiful washes created with lithographic tusche. I missed the tonal color values of lithography. The Mokulito process allows me to achieve the painterly and drawing qualities of lithography that I love in my prints.

Manzoku and *Nascent* are my first and second attempts at the Mokulito process this past year. In each, I ended up printing the Mokulito matrix twice in contrasting colors. The *Manzoku* matrix was printed first in an almost black green. I then added background color pochoir in an additional five runs. I added very transparent blended rolls of color using Mylar stencils for the fish, leaves, hand and water. This allowed the Mokulito drawing to show through. I then printed the matrix a second time in a very transparent tint of blue (almost white) for *Manzoku II* the monoprint. For *Nascent* I decided to start with the background color printing pochoir with Mylar stencils. This was accomplished with another piece of quarter inch plywood. I used blended rolls on hand brayers for the first four runs. For the fifth run I printed the Mokulito matrix in a transparent white. I then printed it a second time in a transparent blue. I ended up with an edition of ten and two monoprints.

Creating a *Confluence of Color* continues to be my main objective as a contemporary printmaker. I am excited to explore the color possibilities of combining reduction woodcut and pochoir with the Mokulito process.

Artist Information

Originally from New York City, Cathie lived overseas six years in Saudi Arabia and France. She has concentrated on the color reduction woodcut since earning an MFA degree in 1987 from Bradley University, Peoria, IL. Her work has been included in more than 300 exhibitions, 30 solo exhibitions, over 80 juried national shows and 17 international juried exhibitions since



completing a BFA from The Ohio State University. She has received 40 awards at both the national and regional level. Her woodcuts have been exhibited in 28 states as well as Bulgaria, France, Poland, Saudi Arabia and the UK. Crawford's prints are included in private and corporate collections including the International Print Center New York, New York City; The American University Museum, Washington, D.C.; The Safeya Binzagr Darat, Jeddah, Saudi Arabia; and the Peoria Riverfront Museum, Peoria, IL.

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Image Documentation

All work photographed by Don Rosser.

Nascent, Mokulito with pochoir, 20" x 25" bleed print, 2019



Shimmer, reduction woodcut, 6" x 18" bleed print, 2020

Noumena, reduction woodcut with pochoir, 24" x 36" bleed print on Natsume 4007, 2018

Anima Mundi (soul of the world), reduction woodcut with pochoir, 20" x 25" bleed print, 2020

Manzoku II, Mokulito monoprint with pochoir, 20" x 16.5" bleed print, 2019



THE VARIANT NARRATIVES OF COLOR

Prachi Sahasrabudhe

Color is a prominent visual element in our daily lives but as a visual artist, I feel it is underrated. I see color before form or image. It is associated with intimate memory and emotions related to a time, season, place, mood or particular person.

I believe that color is highly metaphorical and can carry several meanings. When one says, “I feel blue today,” it indicates sadness, but if the same person says, “the sky is blue today,” that indicates clear weather or a pleasant day. Thus, blue is no longer just a visual element but becomes an emotion through a figure of speech. Similarly, in my art, the meaning of a particular color changes with every composition, creating myriad moods and meanings and helps me indicate a particular frame of mind metaphorically and create an ambience that works with the form and composition. The spectator is encouraged to resonate with the pictorial language rather than any verbal or written explanation. Thus, color becomes a strong aspect of my visual language and plays an important role in the artistic compositions that I envision and create.

To me, every hue, tint, tone and shade relates to a distinct aspect of the world. Tint expresses brightness or subtlety; tone expresses gloominess or neutrality, and shade expresses darkness or depth. With every lighter tint and every darker

shade, the intensity and perception about the color change. While working with printmaking mediums, I see these immense possibilities in every tint, tone and shade that a hue brings to every layer which is carved or overlapped.

Printmaking in color can be time consuming, but it allows the artist to gradually add layers of color similar to glazing in oil painting. I focus on how the feeling and mood is changed when adding each separate layer. With time I am slowly getting command over the color process in printmaking that progresses from high to low key, enhancing the color balance in my work.

Printmaking in color has allowed me to create expressive visual effects that narrate the story of my travels and natural environments I have inhabited. In a colorful motherland like India, overflowing with its diverse and rich geographies, it is stimulating to witness the cools in the coastal regions, the tertiaries of the plateaus, warms of the desserts and pastels of the mountains from the south to the north of the country. In my work, memories and experiences attached with the places I have visited are expressed through colored compositions.

India also consists of diverse cultural beliefs, languages and lifestyles. Colors are not just in nature but also in our foods, spices, textiles, attires and even our household items. Southern Indian attire is rather plain. The stark whites blend with the greens and blues of nature, but if you go to the mountains of Northern India, the pale and pastel color



schemes of the sceneries are contrasted with the bright attires of the mountain tribes. These varying attires and their color notes play an important role in understanding culture and geography. Knowing the impact a color has on a particular region or city in India, I use it to describe different localities and communities. Color thus becomes a larger concept in my practice, a representation of the culture and communities I belong to or visit.

In my work, I replicate the prominent colors in my surroundings, including sky light, random reflections, plants and flowers, architecture, interiors and textiles. I try to bring the essence of the surrounding elements I inhabit and try to create a mood. The spectator who might have lived in or has experienced similar circumstances can easily resonate with my images, but color, being metaphoric, can bring universal meaning to a spectator from a foreign land.

There are changing dynamics of color in my work. In some images, the red specifies the place and monotone architectural elements. In other work, it expresses an intimate emotional dialogue. It is used to denote the social and psychological condition in a global pandemic. Elsewhere, the color becomes an emotion, a very personal sentiment that overpowers imagery with its prominence. In one of the series from my student days, I have expressed my journey of hostel life, illustrating my psychological conditions through various compositions. I use living and inanimate elements from the surroundings of the hostel room and corridors along with evident use of a gray and blue color scheme of the interiors and exteriors of the hostel building, expressing the gloominess, loneliness, textures and lifestyles inside the hostel.

I enjoy color and the idea that it can trigger various concepts. The technical aspects of printmaking allow me to focus on the emotional impact of each color layer as it develops. The continuous process in printmaking techniques enables me to review the meaning of color at every layer and helps create a balance in visual composition. The amalgamation of printmaking as a technical approach and color as a limitless concept can result in a harmonious yet compelling visual narrative, and with every printmaking work, the concept of color has become stronger than ever for me.

Artist Information

Prachi Sahasrabudhe is a professional artist working in conventional printmaking. Her recent works include narratives about personal existence and social dilemma both physical and mental, triggered from daily occurrences and memories, which are conveyed through colors and illustrative compositions. She has been part of national and international art/printmaking exhibitions, exchange programs, art camps and residencies Pan-India. She has exhibited her printmaking works in Romania, Argentina, Russia, Nepal, Serbia, Turkey and Colombia. She has been working as an art educator since 2018 with different educational institutions in various parts of India.

facebook.com/prachi.sahasrabudhe.73

instagram.com/tints_and_prints/?hl=en

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Image Documentation

The Veracious Red 1, woodcut, 24" x 17.75," 2018

The Veracious Red 2, woodcut, 24" x 17.75," 2018

Monsoon Greens, woodcut, 7.87" x 1.8," 2017



SO SATURATED, IT HURTS

Myles Calvert

The Mantis shrimp can see upwards of 16 hues and all the glorious combinations thereof. The majority of us, with regular color vision, are stuck with a measly three. The question arises, does the increased perception of color allow for a more meaningful and enriched viewing experience? Perhaps we just shut down the whole conversation and state that ignorance is bliss. I propose we debate the infatuation of color within printmaking and expose how, through the use of technology, colors become intensified, glorified, over-planned and critically controlled.

Printmakers have always been a meticulous and measured bunch. Even at the dawn of the printed image through to The Reformation (16th century), *pagan* color use was regulated, and complete lack of color often enforced. Artists working with print shops found control and power over printmakers by choosing to work with black alone, allowing for the existence of the multiple without color-mixing variables or management.

Fast forward through to the widely recognized “advent of color printing” landmark in 1710 by Jacob Christoph LeBlon (three color processes), and the refined, more biologically linked and visually accurate 1870’s Chevreul theories, which were fully explored by the Impressionists, and things start to get interesting. Toulouse Lautrec used metallic dust to heighten the color of his lithograph in 1897. Although I highly doubt he was the first to do this, he is one of the first recorded and well-known artists to do so. The tantalizing pleasure of ink additives and modifiers begins.

Your choices are as follows: paper in various colors, fabric in various colors, oil-based techniques and water-based techniques (along with a handful of grey-zone, water-soluble, Frankenstein-esque experiments). These are your traditional surfaces and readily available mediums within printmaking. Combinations of the above, surface and medium, follow a rigid and methodical set of rules which are fawned over within the print community, comparable to a cult following.

“—But what if I change...?”

“No.”

“—What if...?”

“Sure, try it! But that’s not how it is done.”

Color has been exhaustingly explored and scrutinized (in the most majestic and stimulating ways), most notably through the Munsell color tree, Josef Albers’ screenprinted plates in *Interaction of Color*, and the ever popular, business focused Pantone. Pantone sets out to map the world, categorized by surface texture, glare and lightfastness. They also bridge traditional mixing processes with digital, allowing color and the printmaker to diversify on a technical level.

When looking at the richly printed textiles and wall-coverings of Yinka Shonibare (referencing African textiles, colonialism, global heritage), or the strikingly vivid woodblocks of Polly Apfelbaum (often focusing on craft, design, feminism and color), those vibrant colors and pairings rarely existed (and lacked longevity) prior to the early 2000s. These advanced processes are creating visual experiences that have sparsely been seen before. Once paired with non-traditional surfaces, the printed image



can truly be reinvigorated in much more than just color, but also scale. At what point does intuition, theory and chemistry become muddled when producing fine art? Do industrial needs suppress or enhance creative design?

Sublimation printing is relatively new for fine art purposes and can be directly compared to how Warhol acquired the screenprint process, shifting it monumentally from the practical and fast/efficient needs of industry to the conceptual and color theory interests of the practicing artist. The science of printing out mirrored positives with dye inks, and pressing them with heat and pressure against a polyester-primed surface, allows for the transfer of the image via a solid to gas to solid again process, bypassing the normal liquid stage. Physics! This is far beyond your ceramic mugs, mouse pads, and t-shirts. Polyester (polyethylene terephthalate) is most commonly referred to as fabric that isn't 100% cotton, but should really be thought of as just another version of plastic. The benefits are clear; lightweight, durable, holds its shape and most importantly to us, holds dye incredibly well.

Springs Creative is a textile resource and company based out of Rock Hill, SC. Their history and specialization in the digital printing industry is truly impressive and vast, holding portfolio partnerships with Disney, PeppaPig and Marvel, to name a few. Their sublimation printers (Mimaki brand and others) are capable of producing large scale imagery (beyond textile surfaces) with a gamut range that simply can't be matched by traditional printers. Natural fiber printing lacks in saturation. Colors are excellent, but the sublimation process holds pigment physically within its polyester surface, allowing for the richest

blacks and most vibrant yellows. What about downfalls? With all technological advancements, trial and error play a factor in their longevity and practical use (see above for comment regarding water-soluble inks). Sublimated prints need work in terms of colors fading over time. A recent test for personal work, over the summer months, did indicate a very clear and drastic fade most noticeably with the magenta and cyan hues. Details remained crisp, yet saturation and vibrancy deteriorated rapidly. Direct sunlight, or *hot* ambient light, does need to be filtered via UV glass or similar. To note, the Print Council of America suggests a safe zone of 50–100 lux for gallery-presented delicate print work. The above test utilized eight weeks of intense upstate New York summer sunshine.

Blessed be the teaching printmaker who is fortunate enough to have access to college-level equipment. Alfred University hosts the division of Expanded Media, within the New York State College of Ceramics. A recent gift from an alumnus has allowed for sublimation to be added to the vast facilities and technology already at the fingertips of students, thanks to the efforts and vision of the department staff and faculty. It is with these facilities that research and interest in this *new to us* technology has emerged.

The fusion of tradition and technology has always been an interest, and vital to the way I approach printmaking. Recent work has fused the sublimation process with screenprint. Normally, I approach screen layers as a way to add a spot color or area of focus, such as a gradient or glossy finish. I now find myself using screen to push back areas of sublimation, striving for depth within the flat surface. I mix and tease the two back and forth,



diluting the polyester liquid, screenprinting with it, and brushing it on. I change the heat temperature and the physical pressed time, often choosing 100% cotton rag and robustly thick papers. What emerges, is a highly intense (but controllable in terms of editioning) image, which can be as photographic or gesturally abstract, as desired. The surface quality of the polyester can repel the traditional water-based screen inks, leading to a droplet/pooling effect, which is easily remedied with a delicate sanding of the surface to build an invisible texture. Thoughts of 1970s' textiles and sheer finishes do come into play. Those 100% non-breathable, humid, and shimmery disco shirts with intense colors appear that way for a reason. As not all papers are capable of being fed through a flatbed or digital printing system, this process requires more attention and further exploration. As fabrics have blends (polyester, cotton, spandex), papers have crept forward beyond plant fibers. The synthetic Evolon AP paper is a blend of polyester and nylon, allowing it to maintain the weight and feel of traditional western rag papers, with the gamut range which is desired from the sublimation process. This is but one additional variable to the mix of what is to emerge from the evolution of color within printmaking.

Artist Information

Myles Calvert was born in Collingwood, Ontario. He attended the University of Guelph, Ontario, with a focus in printmaking and completed his MA in Printmaking at Camberwell College/University for the Arts, London. Major bodies of work include installations of screenprinted toast and the idolization of popular British celebrity culture. He worked for the National Portrait Gallery before moving to Hastings in East Sussex, to teach printmaking at Sussex Coast College and become Duty



Manager of the Jerwood Gallery (now Hastings Contemporary). Myles' toast-based work continued with a 43,000 slice installation during the Queen's Diamond Jubilee, drawing BBC media attention. He returned to the University of Guelph to teach. Residencies include Art Print Residence, Barcelona, Spain and Proyecto'ace, Buenos Aires, Argentina, as well as a lecture/workshop at Pontificia Universidad Católica del Perú, Lima. Myles is currently an Assistant Professor in Fine Arts at Winthrop University, SC.
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Image Documentation

Yinka Shonibare, MBE, *Nelson's Ship in a Bottle*, YS MBE, sculpture, Trafalgar Square 4th Plinth, May 24, 2010-January 2012, photo by Quentin, UK, [https://commons.wikimedia.org/wiki/File:%27Nelson%27s_Ship_in_a_Bottle,_YS_MBE%27_2010_by_Yinka_Shonibare,_MBE_\(b.1962\)_-_panoramio.jpg](https://commons.wikimedia.org/wiki/File:%27Nelson%27s_Ship_in_a_Bottle,_YS_MBE%27_2010_by_Yinka_Shonibare,_MBE_(b.1962)_-_panoramio.jpg)
Henri de Toulouse-Lautrec, *Miss Loïe Fuller*, lithograph in five colors, wove paper, 15" x 10.25," 1893, Art Institute of Chicago, https://www.artic.edu/collection?artist_ids=Henri%20de%20Toulouse-Lautrec&classification_ids=print
Polly Apfelbaum, *The Potential of Women*, detail, at Alexander Gray, New York, NY, September 7-October 21, 2017, photo taken by Polly Apfelbaum, [https://commons.wikimedia.org/wiki/File:The_Potential_of_Women_\(detail\).jpg](https://commons.wikimedia.org/wiki/File:The_Potential_of_Women_(detail).jpg)
W.W.McQ.D (What Would McQueen Do?), sublimation image transfer, screenprint, puff ink additive, 32" x 32," 2018
W.W.McQ.D2 (What Would McQueen Do 2?), sublimation image transfer, screenprint, puff ink additive, 32" x 32," 2018



THE ARTIST'S LUNCH

Liliana Esteban

Yes, we are definitively what we eat. We say a good diet helps us to keep our organism young, healthy and strong.

Much has been said about the color of a diet for healthy nutrition. The antioxidants, mainly in fruits and vegetables, are in fact responsible for the different colors of these food items. The more intense the color of fruits, vegetables and fish, the more antioxidants are present in them.

The statement “we are what we eat” can’t be more right. As good food is indispensable for muscles and tendons, printing ink cannot be missing from a graphic artist’s table.

Can all these elements—fruits and vegetables, tools and materials—show us something else about an artist’s everyday life? Perhaps this colorful rendering of fruits and vegetables conveys an idea not only of an engraver’s diet, but also of the fact that “a life without making art, without engraving” is meaningless for me.

The still lifes I represent in my monotypes are set in my engraving workshop. I take the everyday elements of the graphic artist, tools and materials accompanied by fruits and vegetables, as a model and inspiration.

But what do I mean by this depiction of still life with these fruits and vegetables, created by gouges, burins, rollers and graphic inks? All these elements symbolize the need to survive, following a diet that takes care of body and spirit. This “graphic still life” forces us to reflect on the vital need to do our work on a daily basis. For me, this is accomplished with large amounts of graphic ink: medium red, base green, base orange, cover white, sepia, reddish

brown, hot red, purple and cobalt blue. Each color makes its contribution to the food chain.

As I work with color, it is important to define the order chosen to print each tone. When I use a wide palette I can choose low density inks, with a high percentage of transparent ink relative to pigment ink, which allows me to handle color value and saturation. Dilution and transparency of pigment inks allows me to work the color in the graphic work from the field of painting.

Warm colors are printed in several thin layers. The first impressions are ink with little pigment and a high percentage of transparent ink. For example, red can start from a medium red ink with a low pigment density and by superimposing yellow ink layers, reach a vermillion red. In the same way I can handle a palette of warm to cold analogues. I start from a low-density red and through thin, blue ink layers, reach violet, and finally dark blue. Higher density inks such as black and white will always be the last to be printed, or they will be used as blocking pigments.

To carry out works with greater elaboration and complexity, I must print in several stages, controlling all the steps depending on the time in which the drying of the inks occurs. I can start from the primary colors and expand the palette to secondary, earth and tertiary only by ink transparency.

This series of 40 prints, *The Artist's Lunch*, has linocut plates which makes it a monoprint. I use these moving matrices to explore variations in the image. Linocut plates are printed with dense inks without additives or transparent inks. I use the color printing of these plates as space generators in the image plane. In some works, I create new



plates of flat shapes for each of the linoleum matrices to print them with black ink. The drying time is 48 hours. On these flat shapes I print the carved linoleum matrices with white ink. This black-on-white printing feature results in negative images.

Printmaking is a special case amongst artistic media. The wide variety of materials and techniques that can be used make it a particularly flexible and resourceful medium, offering the artist many possibilities of experimentation and expression. I share the thought that certain ideas are best expressed by combining more than one technique. Each technique provides a wide range of expressive and aesthetic possibilities to experiment with. Its combination provides creative freedom to build the image that every work needs. I have come to the conclusion that when I do a fusion by merging several procedures into a work, I get a language of greater expressive wealth. In this way I find what I want to say.

Monoprint provides the possibility to work these topics spontaneously, using simple resources and obtaining good results. The subtractive method is to ink a matrix and then draw on the ink layer with any tool that leaves a mark, spatulas, pencils, rags, swabs, etc. It allows different types of marks based on subtracting ink. Removing ink in a controlled way allows you to work the image with a wide gradation of tones.

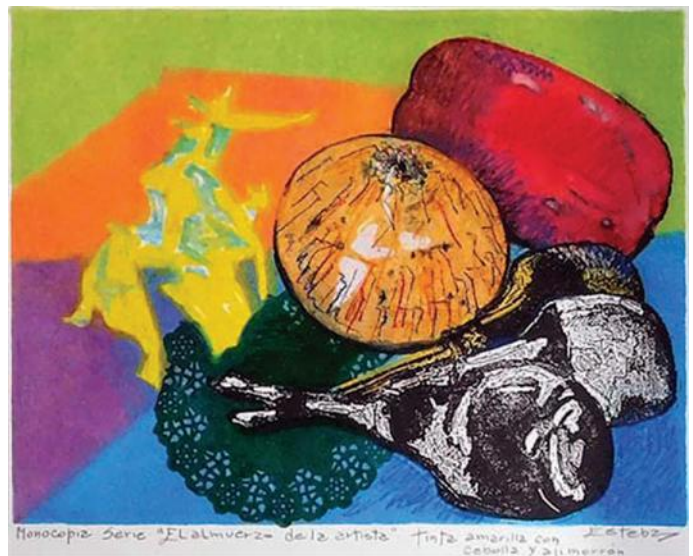
The method of outlining or sketching is based first on inking a plate with a thin layer of graphic ink. The sheet is then laid on top, and by the rubbing procedure with pencil, pen, comb or any element that exerts pressure on the sheet, it is drawn. This process allows me to work the image

with different types of line, its thickness and value. It also enhances the shape with visual texture and weft.

Another way to work with this method is to ink a transparent acetate plate with a thin film of graphic ink. Place the plate on top of the sheet and on the inked plate sketch a preliminary outline to start rubbing with pens with a variety of tips. In this technique I use several acetate plates, one for each color, from the palette that the image needs. This way of working results in graphics and colored textures, creating an atmosphere similar to the technique of painting with oil crayons. When I work with outlining or sketching, the linear overlap must be worked in several stages, to allow the ink to dry and not produce fillings.

Materials such as fabrics, lace, cardboard, plastics or any other textured material can also be used to create visual texture effects. The exception is metallic objects as they damage the paper and the press. Once inked, they are placed on the paper and thus are recorded. The inks must be dense, and must have contrasting colors to be defined for the registration of the print.

Another technique is one where paper or acetate stencils are used, repeating shape that can be manipulated in different ways. It can be printed once, removed, and reprinted by changing the position or color of the ink. These can be negative, inking the draft, or positive, where the inking is in the template. I use this technique for printing flat colored areas. This technique, for me, shows the possibilities of experimentation, with quick visualization and results, which aid me in expressing color ideas in food.



Artist Information

Graphic artist, Photogravurer. Graduated from the ENBA Manuel Belgrano, Buenos Aires and the EMBA Carlos Morel de Quilmes, Buenos Aires. With 500 collective and individual exhibitions in Argentina and 40 countries around the world, she has received numerous distinctions including: 1st Prize of Monocopia, XXI National Salon; TAI-HE MASTERPIECE International Prize Print Biennial, Beijing; 1st Prize, Casa América Foundation, Genoa, Italy; Second Biennial Ex libris Lighthouse, Pancevo, Serbia; Acquisition Prize 15th Print Exhibition, The Space Group, Seoul, Korea; Nomination, The International Small Engraving Salon, Carunari, Romania; Award, 15th International Ex Libris Exhibition, Taipei, Taiwan;

The Honorable Mention Prize, 14th International Biennial Print Exhibition, Taiwan; Award International Exhibition of Graphics, Colombia; Nomination 8th International Biennial of Mini Print, Tetovo, Macedonia.

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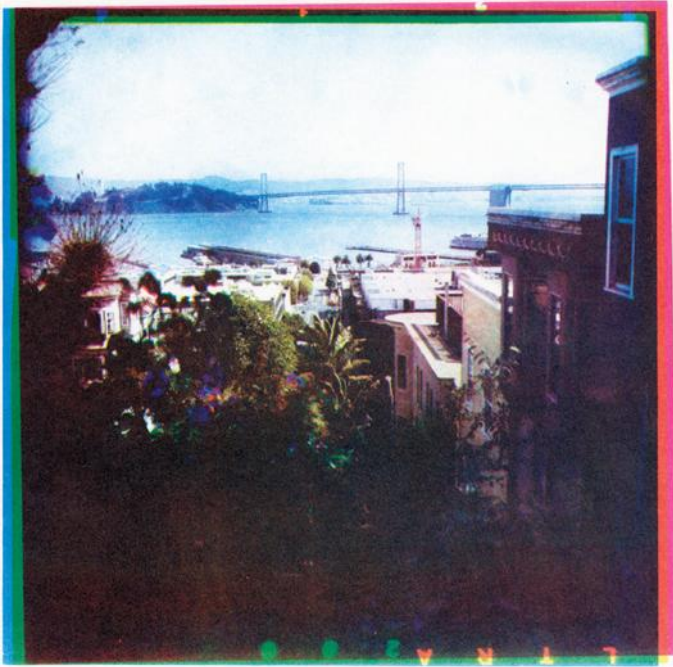
Image Documentation

With Cezanne and Matisse for Desserts, monoprint, 27.6" x 39.4," 2020

Vegetables with Graphic Inks, monoprint, 13.8" x 19.7," 2019

Green Vegetables, monoprint, 13.8" x 19.7," 2019

Carrot and Burin, monoprint, 13.4" x 15.8," 2018



NOW YOU SEE IT, NOW YOU DON'T: ILLUSIVE COLOR

Suzanne Klein

My practice is centered around color. As a scientist I can only emphasize that color is a miracle of the mind. Without the human soul, it does not exist. I am choosing the word soul and not brain, because color is not only generated by the interaction between an electromagnetic wave and receptors in the eye sending electrical signals to the brain, but also fundamentally influenced by time, memory, smell and touch. To allow my prints to represent all these influences, I am using a method steeped deep in physics.

It starts with Isaac Newton and the bubonic plague. In 1665 just after Newton had received his BA, the University of Cambridge closed to minimize the effects of the Great Plague on staff and students. Isaac Newton returned to Woolsthorpe Manor in Lincolnshire, the house he was born in. The next two years in quarantine allowed Newton (luckily distractions by online meetings did not exist yet) to develop the theories he became famous for: calculus, the law of gravitation and optics. He was the first one to dispel the hypothesis, stated by Empedocles in the 5th century BC, that light beams are sent by the eye to probe objects in the field of vision. Experimenting in the dark with only a small hole in the window shutter, he could not only show that the eye was not the source of light but also that the white sunlight is not really white but embodies all colors.

He sent the sunbeam through a prism and generated a rainbow of colors which he could recombine to white light by a second prism. About forty years later, Thomas

Young established the wave model of light i.e., that light travels through the universe like waves through water and generates the same patterns as water waves when they cross each other or are reflected by an obstacle. He also introduces the concept of *particles* in the eye which are sensitive to the red, green and blue parts of white light. It took another fifty years until Hermann von Helmholtz finally established the existence of rods and cones in the retina and their role in the perception of color. Understanding how color was generated was a slow process and took over 100 years. During the same period when Helmholtz was working on the physiology of color perception, James Clerk Maxwell developed a trichromatic color theory and applied it to the newly invented photography (it has been one of the highlights of my life when I stumbled across his grave at Parton Kirk during a mountain biking trip to the 7stanes in Scotland). It is Maxwell's theory that has had the most prolific influence on my practice, and it is his model which I reconstruct to record color in my work. Maxwell describes his work as:

Let a plate of red glass be placed before the camera, and an impression taken. The positive of this will be transparent wherever the red light has been abundant in the landscape, and opaque where it has been wanting. Let it now be put in a magic lantern, along with the red glass, and a red picture will be thrown on the screen.

Let this operation be repeated with a green and a violet glass, and, by means of three magic lanterns, let the three images be superimposed on the screen. The colour of any point on the screen will then depend on that of the corresponding point



of the landscape; and, by properly adjusting the intensities of the lights, etc., a complete copy of the landscape, as far as visible colour is concerned, will be thrown on the screen.¹

The result of the recording process is three black and white silver halide negatives. Color is recorded in three different intensities of grayscale patterns. The color needs to be reconstructed from the greyscale in the three negatives. Maxwell used lantern or glass slides and projected the images through the same colored glass filters he recorded them with (a principle used in all modern displays.)

I am following Maxwell's procedure in my practice. Using an old-fashioned analogue film camera in combination with red, green and blue filters slows image taking down to an almost painful level. This is certainly not a snapshot approach. The camera has to be set up on a tripod, the light intensity has to be measured, exposure time and aperture have to be calculated based on the light transmission of the filters and then even with the help of an assistant who places the filters in front of the lens, it will take at least a minute until the three RGB images are taken. Time will not stand still, people will move, the wind will blow, light is changing. Recording images in this way gives me on one hand the certainty that the intensity patterns on the film will not degrade with time, i.e., the color will always be true. On the other hand time itself will leave a trace on the three negatives, a trace I have no power over, and I embrace as a proof of life.

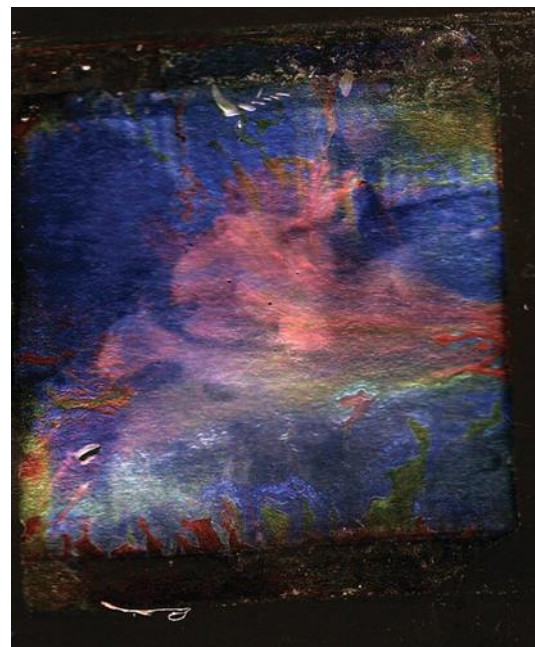
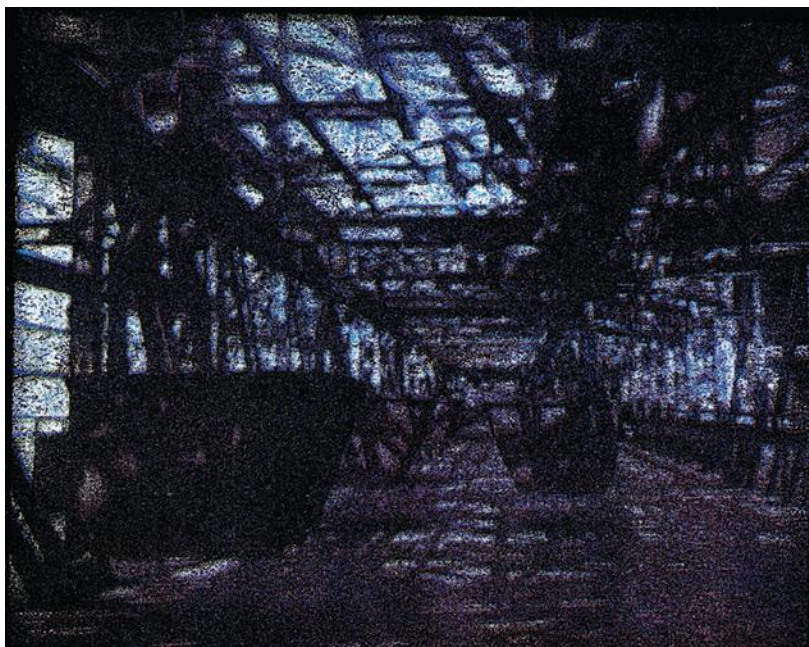
The negatives are the basis of my printmaking practice, and that is where my soul comes in. I rely on memory to reconstruct the color image which allows me to relive



and reflect on my experience. Remembering the color means also remembering the weather, the temperature, the scents, noise, people as well as my own emotional state that inhabits such memories. These layers color my color, enriching the process and creating depth within the work. Through my choice of color in the printmaking process I hope to instigate a similar state in my audience, generating a playfulness and sense of nostalgia.

My practice predominantly focuses on color reproduction through Woodburytype and photolithography, which I will not discuss further, but concentrate on the less well known Woodburytype. Woodburytype is a historical printmaking method which is rarely used by contemporary practitioners.

Grayscale and color are achieved by a continuous gelatin relief taken from a relief printing plate. To make the printing plate, I use Toyobo Printight Solar Plate KF95 plates, which have a transparent mylar backing. The transparent backing is important since the plate has to be exposed from behind, that is through the backing, to generate the relief necessary for Woodburytype. For traditional cyan, magenta and yellow printing on white paper, the RGB negatives are scanned and digitally turned into positives. For Woodburytype the positive image should not contain black. Photographically it would be underexposed. After adjusting the size to the desired print size, the image is printed on transparent film, brought into contact with the back of the plate and exposed to UV light. Where the UV light is blocked or partially transmitted by the film, the photopolymer stays soft and is washed away during development. Where the film is transparent, the photopolymer hardens and forms the elevated parts



of the plate. Since the plate is exposed from behind, the photopolymer starts hardening next to the substrate and a relief forms whose height is a function of the grayscale of the film. The detail in the plate is determined by the exposure time: the longer the exposure time, the finer the detail and the flatter the relief.

After drying, the photopolymer plate is then hardened a second time by flooding it with UV light, varnished with sandarac varnish and oiled before warm, pigmented gelatin is poured onto the plate. Paper is placed on top, and the sandwich is pressed together until the gelatin has gelled. A full color print is achieved by overprinting three times with different plates. The green plate is filled with magenta, the red plate with cyan and the blue plate with yellow gelatin ink. By choosing the height of the relief and the pigment concentration of the gelatin ink, I can change contrast, saturation and hue of the final print which allows me to depict my memory including the heat of the sun, the smell of the sea and the sound of the moment.

Acknowledgement: To thank Niamh Fahy for useful comments and for helping me with shedding my scientific style in this paper. This work was funded by the EPSRC grant EP/R011761/1.

¹J. C. Maxwell, XVIII—*Experiments on Colour, as perceived by the Eye, with Remarks on Colour-Blindness*, Transactions of the Royal Society of Edinburgh, vol. 21, no. 2, pp. 275–298, 1857, doi: 10.1017/S0080456800032117.

Artist Information

Susanne Klein is a physicist by training and has lived and worked in the UK since 1995, first as a Royal Society Research Associate at the University of Bristol, and then as a Senior Research Scientist at Hewlett Packard Labs Bristol. She was appointed an EPSRC Manufacturing Fellowship at the Centre for Fine Print Research in January 2018. She is working on the reinvention of old printing technologies, such as the Woodburytype and



Lippmann photograph. Working in the School for Art and Design has allowed her to expand her printing practise and explore the interaction between the object, memory, materiality and maker.

people.uwe.ac.uk/Person/SusanneKlein

cfpr.uwe.ac.uk/people/susanne-klein/

Image Documentation

Bay Bridge, lithography, 7.87" x 7.87," 2019

Crissy Field Beach, lithography, 7.87" x 7.87," 2019

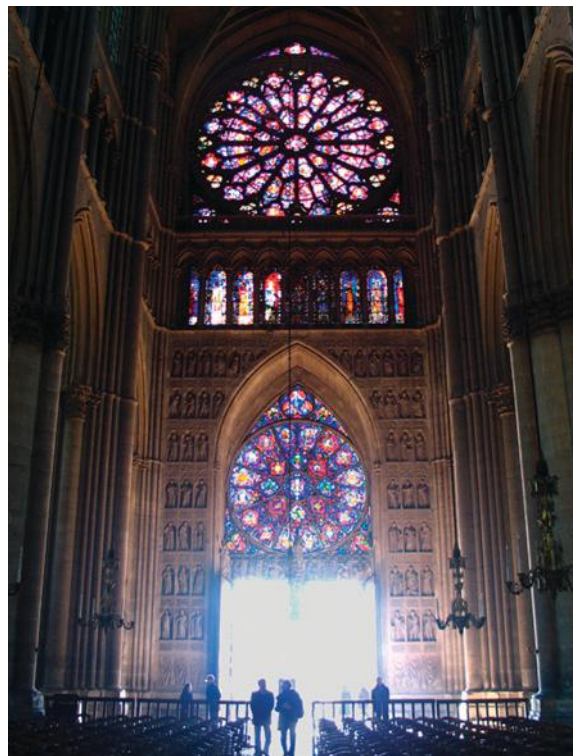
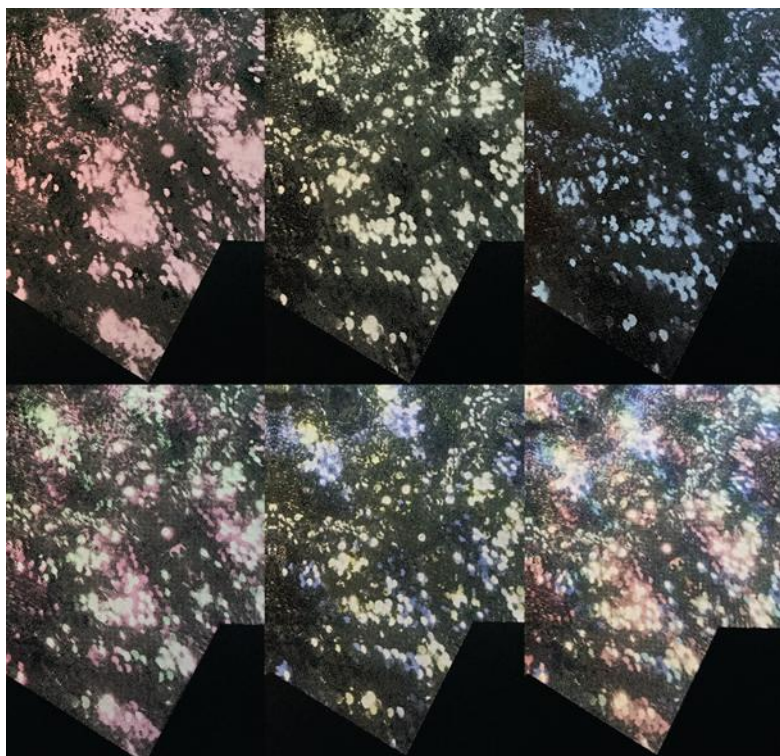
Yellow Berries, Woodburytype, 8.27" x 7.5," 2020

Dragon Tree 2, lithography (no screen, grain from analogue film), 7.87" x 7.87," 2020

Völklinger Hütte 1, lithography (Spectral pigments in linseed oil on black Plika paper), 6.30" x 7.87," 2020

Oranges, Woodburytype using photopolymer, 2.4" x 2.4," 2020

Völklinger Hütte 2, Woodburytype (Spectral pigments in gelatine on black Plika paper), 6" x 7.87," 2020



NEW THEORIES IN COLOR: FROM RGB TO RGB

Carinna Parraman

Introduction

From a young age, I was fascinated by medieval stained-glass windows, the transparency of color, and how colors vibrated, danced and shimmered. However, the ability to reproduce this sensory and perceptual experience in print and reproductions in books has always proved to be disappointing. As an undergraduate student, I explored translating this vibrancy of color through screenprint and juxtaposition of patterns and colors. As a PhD researcher, I explored the relationship between the art, science and measurement of color. As an academic, I am interested in color and halftoning, color perception and the appearance of objects and textures under different lighting conditions. And last but not least, I think about how to combine two key components: printing with pigments that is subtractive, and mixing spectral color (red, green and blue) to obtain a light color that is additive.

Mixing Color Using Pigments and Inks

Students of color theory are taught that red, yellow and blue are the primary colors. However, these generic color terms, pigments and quality of colorants vary widely according to their spectral ability to reproduce color mixtures. For example, if one has tried mixing a cadmium red and ultramarine blue to obtain purple he or she will be disappointed. Pigments or translucent inks that are closer to the spectral color range are the process (CMY) colors:

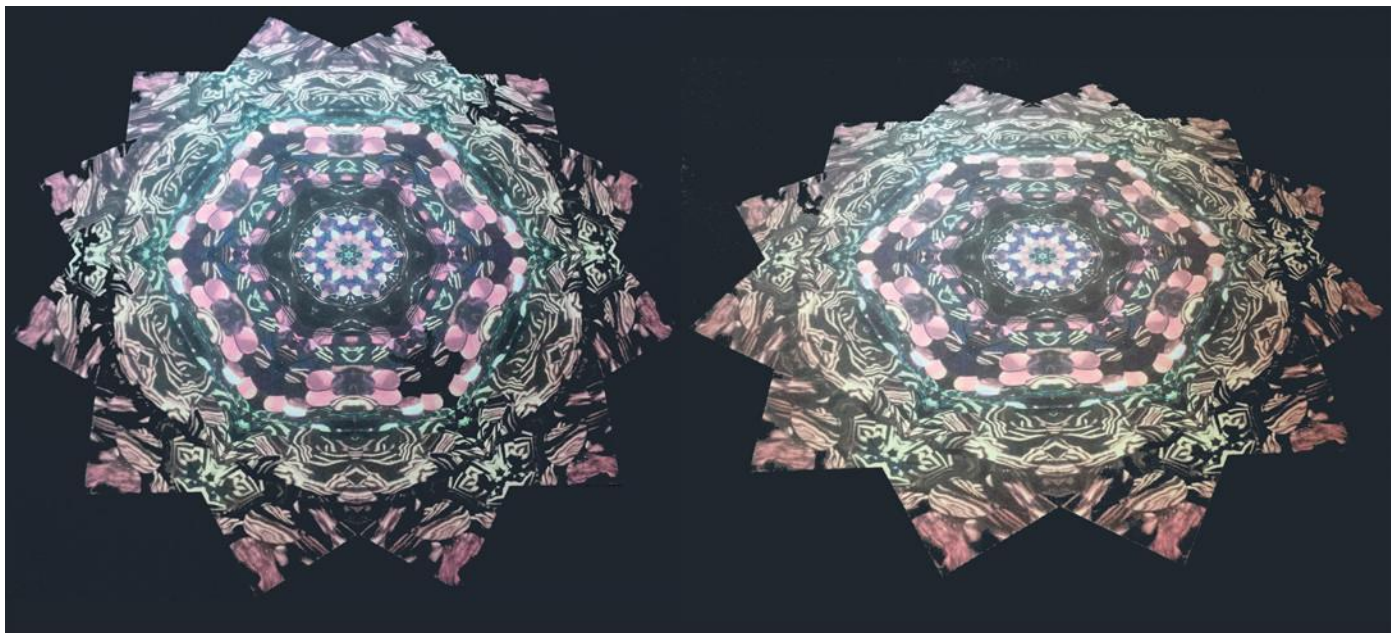
cyan (manganese), magenta (rose madder), and yellow (cadmium lemon).

Over the last century we have relied on the combination of halftones and subtractive CMYK ink primaries to translate a screen-based image or photograph into a print on paper. CMYK printing is certainly commercially suitable for many industrial applications, but what of other colors that are difficult to reproduce? These colors include structural color (beetles, butterflies, birds) and iridescent materials (mother of pearl, opals, lustre-ware).

This article aims to about-turn additive color by exploring printing methods using RGB mica pigments. These pigments are printed onto black paper, emulating colors as one would see on a monitor screen. The aim is to explore images that contain unusual structural colors and geometry, or specular activity, which are challenging to photograph and reproduce.

Art versus Science

Newton's experiments on spectral color in the 18th century, additively (with light), marked the beginnings of color science optics and profoundly transformed scientific theory. During the Age of Enlightenment, the Western world was still mostly entrenched in religious beliefs and as such, provoked a backlash against this so-called reductive and scientific thinking. Artists and poets including William Blake and John Keats were strong opponents of Newton. Keats claimed Newton had destroyed the mystery of the rainbow and damaged the art and poetry of the natural world. Artists were fearful that color was no longer exclusive to a painting tradition and was now defined by



theory, numbers and equations. Blake's painting of Newton depicts the scientist busily segmenting the world with a compass and unaware of the beauty of nature around him.¹

Returning to the stained glass, I would like to compare the intensity of colors that can be perceived when looking into a kaleidoscope. A kaleidoscope is composed of a long dark tube with two apertures. At the near end, is a small aperture; an eye hole to look into. At the far end are tiny pieces of glass or metallic fragments held between two glass plates, which are multi-reflected by angled mirrors. The tube is directed towards the light, the tiny fragments catch the light, and as the small pieces are rotated inside, an infinite variety of composite patterns is revealed. The kaleidoscope was invented and exhibited in 1816 by Sir David Brewster. While experimenting with candlelight and mirrors, he observed a reflective symmetry of multiple images. Brewster, like Newton, was interested in the study of optics and scientific instruments. Still, for this instrument, Brewster considered it to be less scientific, but of more value for the ornamental arts.³ The influence of light and geometry from these miniature kaleidoscope apertures can be compared to the magnificent multicolored and multi-segmented Gothic Rose windows of the Cathedrals of Northern Europe. The dark interior of a cathedral could be compared to a camera obscura. As the light spills inside and is filtered by the stained glass, each section of the circular windows is framed by stone tracery to produce a dazzling symmetry of color.

How to reproduce light

In principle red, green and blue (RGB), are the primary or spectral colors from which all other colors can be derived. Mixing these colors produces the secondary and complementary colors cyan, magenta, and yellow, each reflecting one-third of the spectrum.

Spectraval™ pearlescent pigments (technical note 1), which are so-called red, green and blue pigments, can be used to create alternative color mixtures. The printing process and overlaying of colors mimic insects' structural color such as beetles and butterflies. These new pigments work by combining reflection, refraction and interference, and when all over-layered result in white. And similar to the structural appearance of beetles and butterflies, the printed colors change, depending on the viewing angle. These pigments are only effective on black paper, and if printed on white, colors are hardly discernible (technical note 2).

The Development of Prints

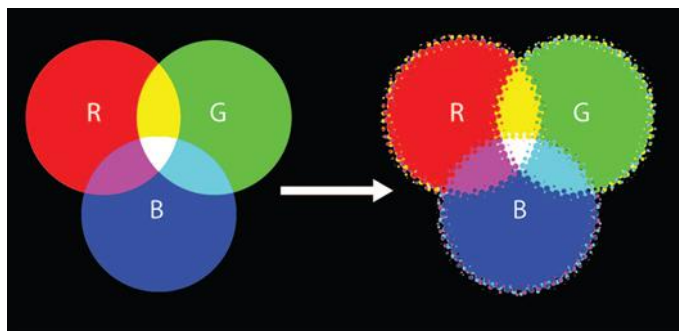
Inspired by the Rose windows of Gothic cathedrals, I have been developing a series of digital images in preparation for printing on black paper (technical note 2). Emulating the appearance of a kaleidoscopic, I have combined multiple fragments to create a multi-faceted symmetrical image. In preparation for printing, images are converted using a relatively coarse halftone of 50 LPI (technical note 3) and printed as three separations of red, green and blue. Combining larger halftone and coarse screenprint mesh enables a significant deposition of ink and improved coverage (technical note 4). The translation from screen to paper does present a reduction in color saturation. Therefore, image content related to real-world colors (such as sky, grass, etc.) is less applicable to this process. However, the printing process does reveal some surprising results. Analogous to mixing wavelengths of light, through careful color separation and printing, a particular range of colors can be obtained from the red, green and blue pigments, including yellow and orange, lighter colors and white.

Technical Notes:

1. Merck's Spectral™ pearlescent pigments are designed for printing in additive mode.
<https://www.merckgroup.com/en/brands/pm/spectral.html>
2. In the same way that the whiteness of the paper is crucial for the transmission and reflectance of CMYK inks, the blackness of the substrate also plays an essential part in enhancing RGB pigments. The one-of-a-kind plastic-like appearance of Plike 330 is like none other in this selection (<https://www.gfsmith.com/our-collection/#803/26491>). The following table 1, shows the (CIE) L*A*B* values of a range of black papers, where L describes the lightness value (0 is the darkest and 100 is the lightest). Gmund from Germany, provides a diverse paper range that includes Action Go to Hell Black, and the Urban Architect Black. Both are hard, smooth papers, that are equally suitable for offset and silkscreen printing (<https://gb.gmund.com>). Although the term plastic may be off-putting, this paper's texture and appearance is highly smooth. It is an excellent non-ink-absorbing substrate and highly suited for screenprinting decorative pigments (www.neenahpaper.com). For more of a decorative appearance, Slater Harrison's 90gsm Centura Pearl Black, is the darkest paper in this selection (see Table 1), and can be used for screenprinting and offset printing.
3. DPI (Dots per inch) is the number of individual dots that can be placed in a line within the span of 1 inch (2.54 cm). LPI (Lines per inch) is a measurement of printing resolution. 50 LPI is equivalent to 100 DPI.
4. The pigment particles are weighed and mixed with Daler Rowney's screenprinting translucent base to specific percentages to enable accurate overlaying. A textile screen mesh of T50 was used, and which also reduces the issue of moiré.

Table 1

Paper/Supplier	Type	Color	Measurement		
			L*	A*	B*
G.F Smith (www.gfsmith.com)					
Colorplan	Smooth	Ebony	21.26	0.19	-1.28
Gmund	Urban Architect	Black	22.59	2.27	-2.35
Gmund	Action	Go to Hell Black	23.04	1.96	-1.79
Neenah	Plike	Black	23.58	-0.16	-0.87
Peregrina	Majestic	Anthracite	23.97	-0.31	-3.19
Mohawk	Strathmore Grandee	Black	24.32	0.05	-2.45
Accent	Fresco	Black	28.07	0.23	0.38
Slater Harrison (www.slater-harrison.co.uk)					
Slater Harrison	Centura Pearl	Black	10.78	-0.15	-1.14



¹William Blake (1757–1827), Newton (1795–c.1805), color print, ink and watercolor on paper, Tate Gallery, London.

<http://www.tate.org.uk/art/artworks/blake-newton-n05058>

²Brewster, David, *The Kaleidoscope: Its History, Theory and Construction*, (1858), London: John Murray

<https://archive.org/details/kaleidoscopeits00unkngoog>

Artist Information

Carinna Parraman is Professor of Design, Color and Print and Director of the Centre for Fine Print Research, University of the West of England, Bristol, UK.

She is a printmaker and specialist in color printing, RGB printing, texture printing also called 2.5D printing, photomechanical print history, color theory and perception within the fields of fine art, design and the applied arts, in particular the craft of the digital. Her research interest addresses the relationship between the appearance of color and materials, and how these are captured and reproduced in paintings and photographs. She has published a book, *2.5D Printing: Bridging the Gap Between 2D and 3D Applications* (Wiley 2018); and is co-participant of Appearance Printing–European Advanced Research School (ApPEARS, Norway).

She is a collector of historic color paint charts and has been expanding this collection by photographing colors in the world via Instagram entitled #colouraday.

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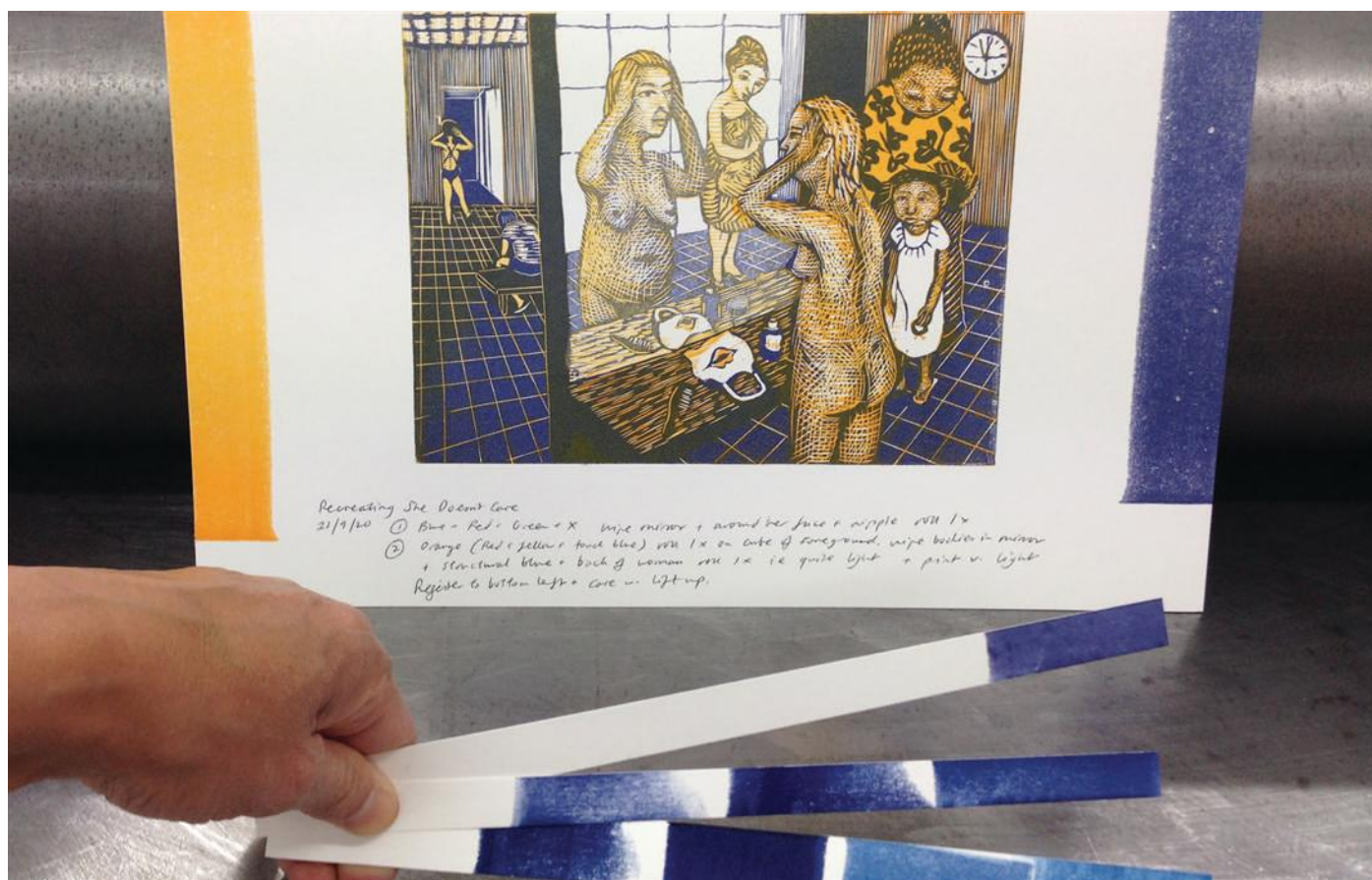
Image Documentation

Illustrates the chronology of printing of red, followed by green and then blue. The top section shows each color separation and how they appear on the black paper. The second section demonstrates the progression of a red overprinted by green, and green overprinted by blue and the final composite of red, green and blue.

Cathédrale Notre-Dame de Reims

A Kaleidoscope, red and orange, and angled to show different colors. Colors change according to viewing angle.

Schematic of converting RGB wavelengths of light to RGB halftone and pigments



NARRATIVE COLOR

Wuon-Gean Ho

In this paper I'd like to outline how color plays a narrative role in my printed works of the past four years. I will talk about how I use a specific way of applying ink that extends the color range of each plate and how the resulting effects convey mood, direct attention and depict areas of darkness and luminosity.

In 2016 I was awarded a print fellowship at the Royal Academy Schools and decided to create a project which would span a duration of 60 weeks. I would make a print each week, keeping to a portable size of 6" x 8." There would be a maximum of two blocks per image, exploring color and the use of humor in contemporary print, in direct rebellion against the post-modern greys of the graphic output of the Royal College of Art from where I had recently graduated.

This series of prints became a postcard project for my father, who remains in a care home after breaking his neck in 2014, a project that allowed me to leave an image of my weekly impressions on the walls of his room. I wanted to show him a deeper conversation about what it felt like to be a woman, an ethnic minority, a veterinary surgeon, a keen swimmer, an artist, his daughter and to weave in common political events, freak weather occurrences, specific dates

and locations, hidden conversations and jokes. I wanted to use the imagery to convey slower narratives and keep him engaged and entertained.

Color was integral to all these aims, as they made the images brighter and more appealing. Color directs the eye and creates emotion and mood which is separate from the precision of the carved line. In some cases, the color is the direct source of entertainment.

I've since created some 130 images in this way. In fact, the latest twenty prints have become a portfolio and moving image piece on their own, called *Covid Tales* which you can see at <https://vimeo.com/435765992>. The images speak to the lockdown situation that we have all experienced in recent months, addressing issues of isolation, yearning, moments of connection and absurdity.

As seasoned printmakers will be aware, transparent oil-based inks have a lovely way of both sitting on the surface of the paper and sinking in to create new overlapping colors. I like using a brand of ink called Sakura Oil-based Relief ink for printmaking. As my project was speedy, and only used two blocks, I started to use monoprinting in specific ways in order to create two tones of each color. This was done in the following way:

I would roll the block up three times with the flat color, and then wipe away (using a rag) the areas which I wanted to be a paler version of said color. I would then apply an

(21) The Scream
Burgundy



The Scream BAT

① Red to burgundy blend

② Blue + Orange + X (1:1:1) thicker at edge, thin in centre, register to Bottom Right

even sheer coat of color to the whole block with a brayer, using one pass, so that it would be covered with selectively thicker and thinner areas of ink. When printed, the thicker areas would be a full intensity, and the thinner areas would come out as a half-tone, sometimes with a very slight pattern (which can resemble an aquatint) where the ink had separated into tiny specks with the simple action of the brayer passing once over the block.

This is probably best understood by looking at a couple of specific images. In *Spotlight*, 2018 (a print of me trying to find a suitable outfit for meeting the Queen), the first block (in navy blue) has the shape of the breasts and belly and thighs wiped away on the central figure and printed as a half-tone. Other areas such as the folds of the hanging dress also display selective wiping. In the second block (a peachy-pink), the cone of light that forms the spotlight is also a half-tone. Thus, the modulation of colors tells a story about the space and shadows and the shape of the figures and clothes which is independent from the carving that exists on both blocks. The comedy of the bulging body in the tight dress is entirely described by the color application.

In *Mirror Mirror*, 2016 (a print about the distorting mirror in the changing room in York Hall Pool, London), both blocks have been wiped just in the area of the mirror's reflection, creating an illusion of brightness. Once again, this element of the story: the questioning of a mirror's

veracity, its similarity to a doorway to another world, the shimmering space that shows hidden perspectives, has been created specifically through the use of half-tone color, and does not exist in the carved lines.

My second approach to extend the range of colors was to use blends (or rainbow rolls), which I printed at similar or different angles to each other. The blend would be created either with selective thicknesses of ink (from scanty to thick); or with the use of extender; or by using separate colors that merge one into the other.

For example, in *Blue Table Porto*, 2019 (a café in Porto which served terrible cake, but had the most wonderful interior space), the red roll has a hint of orange in the center and green at the edges, bringing a coffee-like murkiness to the shadows. On the second block, a slightly acid-blue that modulates to full intensity left and right, the overlap with the first color plunges the edges into darkness. Wiping the tabletop and rolling it up once to produce a half-tone blue exaggerates this effect of darkness surrounding the central figure and her space.

Sometimes the blend would be very subtle, in a slight lightening of tone in the center of the work, such as in *Study in Millennial Pink*, 2018. The palest hint of pink satin sits behind the black. If two blends are combined, the effect is intensified. For example, *We Tried*, 2019 shows an operating theatre with a tiny guinea-pig swamped by



surgical drapes and the large figures of a vet and vet nurse. The effect of the overhead light is created with bleaching color blends that coincide in the same area around the point of the action around the hole in the drape.

When the blends are perpendicular to each other, as in *The Scream*, 2017 (a print about the time my left index finger was almost eaten by a poodle, which did actually make dad laugh out loud), the overlap of colors is triangular, reaching their maximum darkness at the bottom left and right corners, and their palest at the apex of the work.

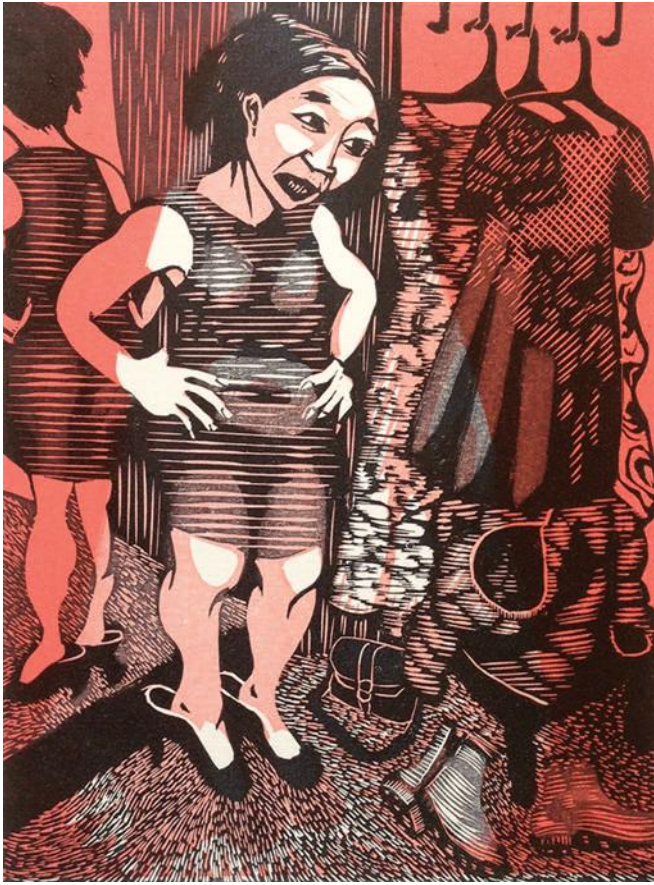
In very rare cases, I relaxed my two-block policy and added a third block such as a transparent yellow. In *Lockdown Chop*, 2020, the figure was originally a shade of dusky red, reminiscent of dried blood, printed with a teal across it to create the shadows. Since I was making this during the height of Black Lives Matter protests, I felt I should be more true to my East Asian origins and introduce a yellow block, carving out only the whites of the eyes and the flash of the scissors, adding a honeyed richness to the image.

I have used color to create shadows that speak of a different emotional state, such as sleep or a state of not knowing. In *Holding Air*, 2019 (a print lamenting solitude), the shadows encroach upon the main subject like a tide, as if a metaphor for immersion in the blueness of night. In

Death by Email, 2020 (made in the height of the pandemic, when the UK was also paralysed by unprecedented warmth), the paprika orange of the figure and furniture is tempered by a purple that overlaps to form a tone reminiscent of black treacle, suggestive of the melting heat. In *Orchid Baby*, 2020, the orchid blossoms glow because of the blue that covers everything else in the scene describing the experience of night.

I try to keep notes with color swatches, although sometimes my instructions are a bit vague. One of my recipes for blue in *She Doesn't Care (If We Stare)*, 2017 states "blue, red, green, X" (the X meaning extender), but with no hints on quantity. It took me a while to figure out that there is a lot more red in the mix than I thought, and that the green was there to cut the optimistic clear purple towards more of a blunted violet.

My portfolio of prints focuses on depicting everyday humor and contemporary moments. The use of color has helped attract attention to the work so that I can engage the viewer in deeper storylines and subject matter, some of which may be on uncomfortable topics such as loneliness or aging. The colors describe elements of the story such as shadows, shapes and mood. My selective inking technique outlined above is a way of extending a block's expressive potential and narrative function, allowing for the creation of quick and simple color images.



Artist Information

Wuon-Gean Ho was born in Oxford and graduated with a BA in History of Art from Cambridge University before taking up a Japanese Government Scholarship in 1998 to study woodblock printmaking in Japan. She later studied MA Printmaking at the Royal College of Art, graduating with a distinction in 2016, and then was a printmaking fellow at the Royal Academy Schools in London. Currently she is a research associate and the inaugural editor of the *IMPACT Printmaking Journal*, an academic peer-reviewed journal published by the Centre for Fine Print Research, University of West of England, Bristol. UK.

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Image Documentation

She Doesn't Care (If We Stare), matching the blue ink in the studio. linocut and monoprint, 6" x 8," 2017

The Scream, BAT proof, linocut and monoprint, 6" x 8," 2017

We Tried, BAT proof, linocut and monoprint, 6" x 8," 2019

Spotlight, color trial proof, linocut and monoprint, 8" x 6," 2018

Death by Email, linocut and monoprint, 6" x 8," 2020





DRAWING MULTI-PLATE COLOR AQUATINTS

Stephen McMillan

An aspect that makes doing color aquatints both interesting and challenging is the mystery of how they will look when the plates are completed and printed. Even with years of experience each print presents a new test of my ability to have the colors produce the desired effect. For this article I will focus on my process in producing two three-plate aquatints I did in 2020. Each presented its own color puzzles to solve.

In drawing the key plate, I start by choosing one of my photographs to work from. I use Photoshop to reverse the photos and break them into 4 smaller pieces, which makes them easier to view while I am painting asphaltum thinned in mineral spirits onto the copper plate. I generally use a #0 series 7 watercolor brush for my paint-outs.

One of the most difficult aspects of doing a multiple-plate aquatint is drawing the various plates in register. At the start I need to decide what color to choose for the key plate. The key color should have enough tonal variation and detail to produce an image transfer that has adequate information to draw the subsequent plates in register. My color choice for the key is usually determined by this factor. I generally draw the blue plate first, though sometimes I draw the red first. I tried doing yellow first once, only to find out why this was a bad idea.

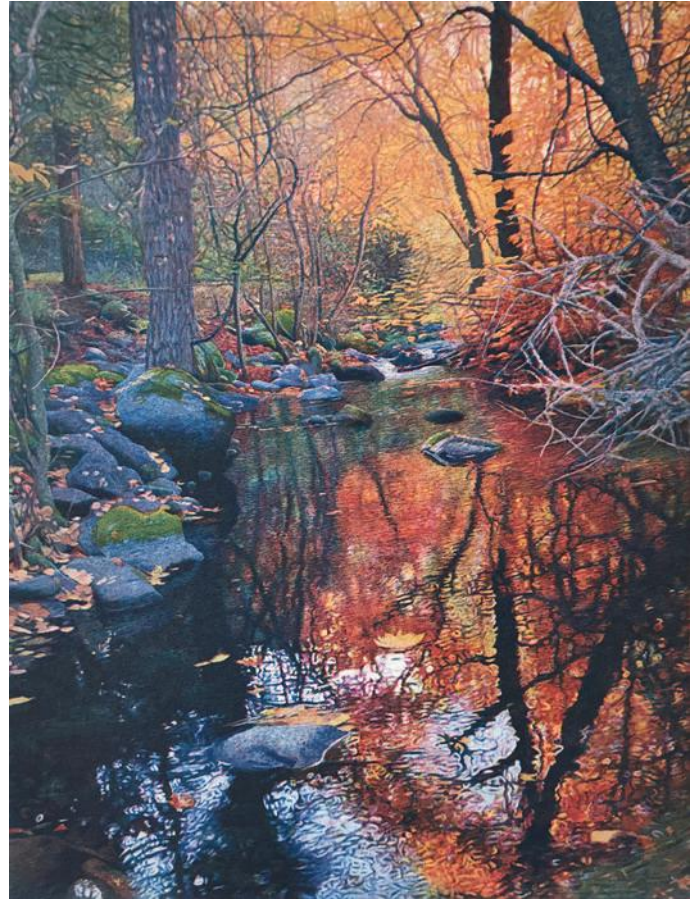
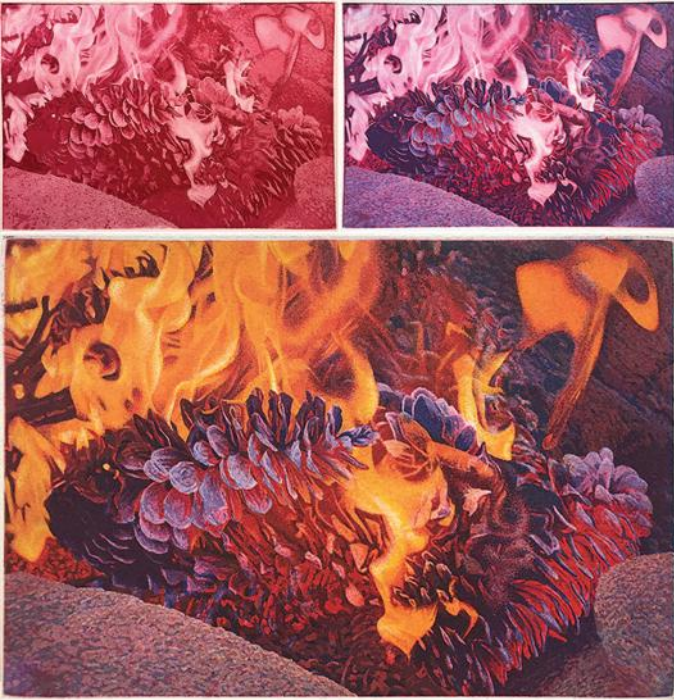
To do a tightly registered multi-plate aquatint, I use an image transfer method that uses two metal bars. The bars are generally made from the same copper plate material

that is being used in the print. One bar is taped or spray mounted to the press bed. It is attached so that the long edge is parallel to the blankets, with a 90 degree notch on the inside of the side closest to the roller of the press. The notch is just deep enough so that the inner bar fits snugly, but not so long that it will pass under the blankets during printing. The other bar is cut in an “L” shape to fit snugly inside of the attached bar. Again, the angles need to be 90 degrees. The inner registration bar is in place when a plate is being positioned on the press and is carefully removed before the plate is printed. The registration bars need to be long enough to hold everything in position firmly, with absolutely no rocking or variable positioning possible.

To set up for the transfer, after the key plate is completed, I soak paper. I soak one or two extras in case the transfer does not go right the first time. I use Arches Cover, which I generally soak overnight. I have found that it should be soaked at least two hours at the minimum. (It is good to be familiar with whatever paper you use so you know the optimal soaking time, as papers do vary). The paper must be large enough so that it can be pinned under the roller when the blankets are lifted to exchange the plates.

Before the transfer, I polish and bevel the other plate(s). They are the same size and thickness as the key. I use a drypoint needle to mark the registration corner in the back of the plates and also to indicate the order of printing. I set the blank plates by the press in the order and orientation that I will use for the transfer.

To accomplish the transfer, it is important that the transfer printing should be done in the same way that the edition printing will be done. That is, the pressure is the



Colors - patch image - prepare photo 5/12/20

Blue

54	5-13-20	
0	6-15	
1.5	5-15 (15°)	
1.5	3 5-17 (15°)	
3	6 5-19 (15°)	
6	12 5-20 (15°)	
12	24 5-23 (15°)	
24	48 5-23 (15°)	
Comp	5-23-20	

Image Transfer etch 5-23-20 40s 2x acid (on third try!)

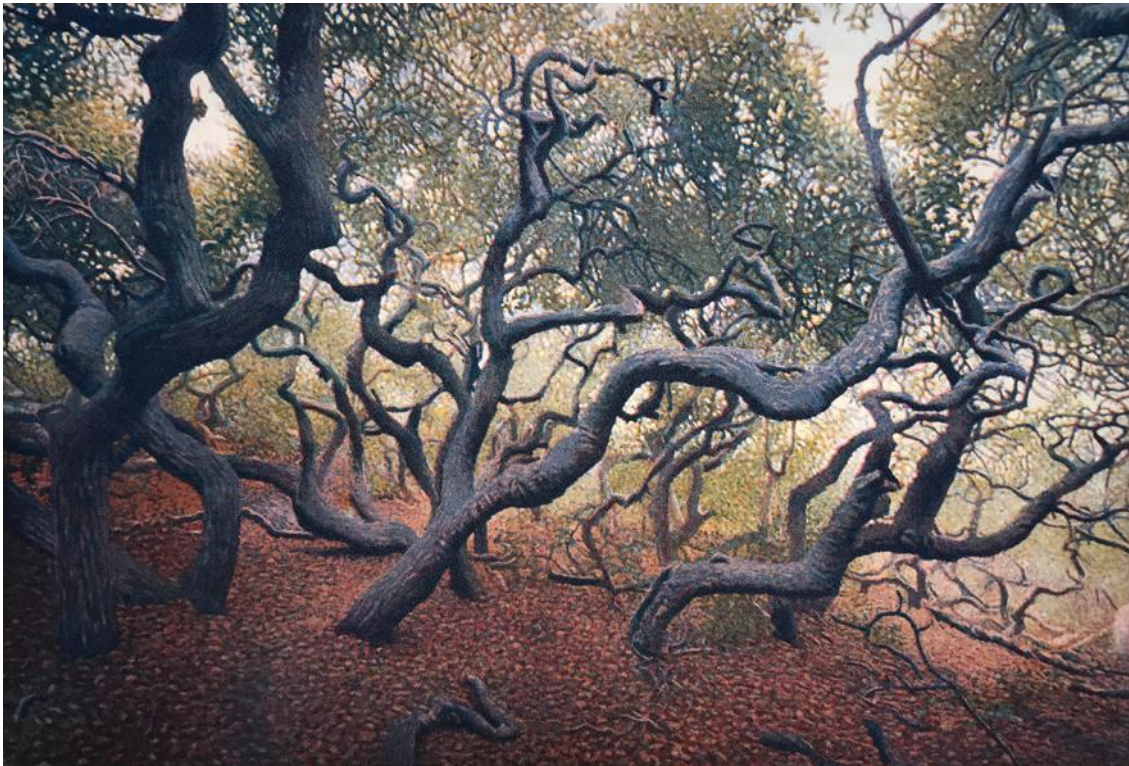
Red

54	5-24
0	5-25 ↓
2	5-25 (15°)
3	5-25 (15°)
0	5-28 ↓
3	5-28 (16°)
5	5-30
7	12 6-2 (15°)
14	26 6-2 (16°)
24	50 6-3 (15°)
Comp	6-3-20

Yellow

54	6-3
0	6-4 ↓
4	6-4 (16°)
6	6-4 ↓
0	6-4
6	6-4 (16°)
9	15-4 6-5 (16°)
25	40 6-5 (16°)
Comp	6-5-20

The image, *Colors*, is primarily a combination of green, orange and red leaves. It was important to draw the image in a way so that the colors stay separate and do not mix into a muddy brown. The red/green bordering areas were a particular challenge. In this print I chose blue for the key plate color. Though there is a lot of orange in this print, the blue still defined what I saw as the most useful information for drawing the next two plates. The copper plate was stopped-out and etched using 7 etch times from 0 to 48 minutes. The image was then transferred onto two plates.



The image transfer is clearest on the plate right after the key, and becomes harder to see in subsequent plates. Therefore, I chose the second color as the one that needs the most exact registration to the key. In this case, red.

I always do the first paint-out before I aquatint the plate. This makes the subtle transfer information much easier to see. (For this reason it is even more important to keep clean paper under your hands on the plate while working. Hand grease can cause smudges in the aquatint). I then aquatinted the plate and etched it for two minutes. This etch and aquatint made it much harder to see information I needed to draw this image. Therefore I decided to wash the plate with alcohol to remove the second aquatint but not the paint-out. I did a second paint-out over the un-aquatinted plate and then re-aquatinted it for a three minute etch. Again I could not see enough, so I washed off the aquatint a third time. That is the most often I have re-resined a plate and may be as many times as I can get away with. The next 4 etches were over the third aquatint. I proofed the blue and red plate to use as a guide in drawing the last plate. I etched the third plate for the less detailed yellow plate. For this one I only re-aquatinted once.

The *Campfire* print was an experiment to see if I could draw a convincing fire. I chose red for the key plate. The copper plate was etched over a medium grain aquatint using 7 etch times from 0 to 48 minutes. When I proofed the red, it looked too dark and dense in the areas I wanted to glow. Knowing that a lot happens when colors are placed next to each other, I continued to see what would happen when other colors were added. I did the transfer to two

plates, choosing blue for the second plate and yellow for the third. When I proofed the red and blue plates, I was happily surprised to see the deep red areas glow next to the blue. So much of color printmaking consists of discoveries like this. Sometimes I try things that don't work, or, as in another 2020 three plate print, have to re-draw the second and third plates to get what I wanted. Just when I think that I know what I am doing, a new surprise jumps up. Always a student!

Artist Information

Stephen McMillan has been making aquatints since 1970. From 1975 to 1979 he was a member of Graphic Arts Workshop in San Francisco; 1980 to 1992, a member at Kala Institute in Berkeley; and has worked in his own studio since then. He currently lives in Bellingham, WA
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Image Documentation

The three states for the 11" x 8" aquatint, *Colors*, 2020

Second paint-out on key plate of, *Colors*

The three states for the 6" x 9" aquatint, *Campfire*, 2020

Autumn Light, three plate aquatint, 12" x 9," 2019

Colors, etch times

Elfin Forest, three plate aquatint, 6" x 9," 2019



LET THE COLORS SING

Kathryn Greenwald

Color interactions have been central to my work as a painter, printmaker and mixed media artist over a span of four decades. Introduced to Johannes Itten's color theories as a student, I was intrigued by the way that color placement energized the pictorial space. A coral placed near a grey-blue form could sing with jewel-like intensity. Artists like Diebenkorn in his Bay Area years, and on into his *Ocean Park* series transfixed me. So did Pierre Bonnard's color play. I learned to focus on complements, warm/cool juxtapositions and saturated hues next to those with lower chroma. The way that light and shadow influence color as well as my own subjective choices direct my process. Color takes me into another world where I can respond and follow its lead. Whether using paint and brush or ink and brayer, layering and proximity of hues build my image.

First-hand experience viewing art is a great teacher. The rich layered surface of Diebenkorn's *Figure on a Porch* captivated me at the Oakland Museum of California when I was a teen and has had a life-long impact. Yellow-oranges, with splashes of pinks to red, glow against deep blue shadows beneath chairs. A greyed sky above the horizon recedes into deep space. The surface seems alive. Color is transcendent.

At University of California, Santa Cruz, I stumbled into some powerful color combinations by happen-chance. In one case, I was drawing pottery bowls with oil pastels. The color in a cast shadow felt wrong so I tried to cover it up with another layer of pastel. Some of the original color

poked through but it no longer bothered me. It received positive feedback so I kept at it. My best work always seemed to come when I wasn't thinking too hard about it, just responding.

Though exposed to color and design principles, it took time and experimentation to incorporate what I had learned. One of the most impactful ideas is the most basic—color depends on relationships. This captures the essence of Itten's teachings and those of Josef Albers. An identical beige square can appear orange against turquoise and brown against orange. Our brains interpret every color by whatever color is adjacent. In creating still lifes and interiors I probed color to create illusions of space, emote mood, translate a sense of place and allow resonance to bring the surface alive.

After graduate school I lived on the Colorado Plateau for twenty-seven years, surrounded by color. Reflected light from a sunlit slab of rock vibrated red within violet shadows opposite. Crystalline blue skies stretched above ancient seas that had turned to infinitely varied layers of red, orange, ochre, mauve, violet and cream as rock formed into canyons, arches and vast stretches of sculptured land. My imagery moved outside. I drew at canyon overlooks and along the rivers that flowed through the landscape. I packed watercolors for raft trips and hikes.

Light surrounded me: direct, indirect, reflected, highlight, shadow, crisp, diffuse. I found lots of opportunities to play within that list. In my artwork I raised the volume of suggested colors I perceived in front of me. I call it pushing the whisper. Light and shadow's influence on color joined my own subjective choices to shape my work.



In addition to color applied to a surface, the surface itself plays a role in color relationships and interaction. For a ground I've used color instead of white. Vermillion, sienna, turquoise or cadmium orange applied first became a unifying field of color through all parts of the image as I painted with lighter and darker hues against their vividness.

I began blocking my compositions by value contrasts and continue to develop prints in this way. It's a way of thinking and seeing. There is no white brighter than the reflected surface of a piece of paper. By leaving whites or off-whites untouched, a higher degree of luminosity is possible. If the media applied is somewhat translucent, the white beneath glows through. With oil paint, I thin with solvent. With etching ink, I add transparent base. With encaustic, I add transparent medium. Encaustic on gampi extends the translucent properties. All arrive at the same end by achieving color interaction and luminosity.

At first, working on monotypes was a short break from painting. I enjoyed the spontaneity of working quickly, trying out different tools for mark making and seeing the way colors fused under pressure. There is something special about the moments at the press when all the ink transfers onto paper and the results are at hand. A one day workshop with a friend got me going; then I pursued it independently at Northern Arizona University. A few years later, I landed in a class taught by Robynn Smith at Monterey Peninsula College. She opened up new possibilities as she introduced

me to a variety of processes. Monotypes suit my love of painting and my desire to work with an intuitive flow of image building. Colors are applied, yet may be removed to restore lighter values or to substitute alternative hues. The press contributes a unique language of textures and surface. The more I worked at it, the more captivated I became. Now printmaking is my primary practice.

During the past decade I've honed my skills using a viscosity process. By thinning the first layer of ink with solvent, then modifying the next layer with burnt plate oil, one color sits on top of the first so that both can be seen as long as it's rolled without messing about too much. I tried this initially with two colors and have been successful with more layers. Initial efforts were six-inch squares. I increased the scale to a full sheet and began dividing sky and land into two parts, inking and printing sky first, then inking and printing the land. It allowed me better control of the color areas and made the inking process fit manageable spans of time.

When I attempted a triptych using three full sheets, I tried the same approach working one plate at a time, sky first, then land. The resulting prints, three related monotypes, done one by one didn't work as a whole. There were inconsistencies where horizontal lines were offset, palette shifted, as well as the way the ink was applied. I wanted all three prints to line up horizontally by color and form. As I was in process though, it was difficult to perfectly

match the color of today's wet ink with yesterday's dry ink and to account for deviations between my guiding drawing that connected the image and the results of each print. The inking itself had the variation in energy that I brought to the studio on different days. I struggled and that triptych failed but it moved me along to find a different strategy.

Next time, I lined up three plates in a row, first to draw with Stabilo water crayons to guide the composition. Next, I inked the top section across all three plates then printed each plate. The resulting consistency from section to section was very satisfying. Each 90" long section took me most of a day to ink with the viscosity process and print so I started thinking of it as aerobic printmaking. I challenged myself to work on a 30" x 44" monotype. Evelyn Klein invited me to use the large press in her studio and then helped with the supersize plate and paper when it came time to print.

A year ago, I found some earlier pastel sketches on the same extra large sheets of Stonehenge. I decided to see what would happen if I layered the monotype over the pastel. It worked; however, I discovered that the greater the complexity of the image, the more sessions and drops required. I adapted the viscosity process to sequential color runs for layering so I had adequate time for the complexity. It involved a community of printmakers in a class at Monterey Peninsula College, because I needed both the large press available there and assistance with each drop.

Working only once or twice a week, it took over a month to complete one piece.

The unusual circumstances of 2020 have contributed to new imagery and experiments. I wanted to push beyond appearances to create a new body of work to explore ideas beyond knowing or certainty. This is a period in which things that seemed routine are suddenly complex or without answer, so during this pandemic timeframe I have taken refuge in my studio and combined monotype with silkscreen and encaustic. Layering has been a new way for me to continue working with colors in their key role while conjuring all that is mysterious and unknowable. I trust my inner knowing as I select or remix, seeking palpable energy in each artwork.

Artist Information

A native of Monterey, CA, Kathryn Greenwald focused on painting at the University of California, Santa Cruz where she earned a BA in Art with Honors. She completed an MA in Art at Humboldt State University; concurrently, she trained as a teacher. The Colorado Plateau was home for twenty-seven years. She taught art at the Museum of Northern Arizona, Northern Arizona University and in the Flagstaff School District. In 2010, she relocated to Carmel Valley and became an artist member of the Carmel Art Association in 2014. The same year she was juried into the California Society of Printmakers. She has participated in numerous group and solo exhibitions. Some of note include: Sullivan Galleries, Salt Lake City; Northern Arizona University, Flagstaff; Coconino Community College, Flagstaff; Maryland Institute College of Art, Baltimore; Hotel Cocumella, Sorrento, Italy; South Australia Living Artists' Festival, Adelaide, Australia; Bluseed Studio, Saranac Lake, NY; and Monterey Museum of Art.

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Image Documentation

Marble Canyon, pastel and monotype, 30" x 39," 2019, photo by Richard Forschino

Turquoise Canyon, in process image, monotype and pastel 36" x 24," 2019, photo by Kathryn Greenwald

Unknown River #9, monotype, silkscreen and encaustic, 8" x 10," 2020, photo by Richard Forschino

Reflected Red, monotype, 30" x 23," 2015, photo by Richard Forschino





LAYERING COLOR USING VISCOSITY

Katherine Levin-Lau

For much of my earlier history with monotypes I utilized multiple runs through the press, spontaneously overlapping bleeding images to create collage-like effects. My monotype practice radically shifted in 2010 when I embarked on the production of 100 small prints. I began to plan my compositions using paint chips from hardware stores, as part of my decision to take two years to focus on and experiment with color. This period of close study proved to be an epiphany for my work. As I worked through the layers of my prints, I found I could overlap the chips to imitate the ratio of color developing and push myself to use color outside of my normal vocabulary. I also simultaneously developed a technique that allowed me to create stencils, a layering that saved the first images printed so that my layers were now one behind the other. My color philosophy and technical methodology are inherently intertwined, not only by their shared genesis. When taken together, they represent an alternative approach to monotype as a way of thinking and a visual set of practices.

I was a printmaking student at San Jose State University in the 1980s when Joseph Zirker, a pioneer of innovative techniques in monotype, was teaching viscosity printmaking workshops in the San Francisco Bay Area. It was not in my budget to attend so instead I begged information from friends who simply said it was a technique that allowed you to layer your inks by changing

the amount of oil in each layer. I began applying these concepts to my own work, not knowing at the time that I was doing it in reverse of the way in which Joe had taught it. But it worked for me. Here are the materials I used: zinc plate, Graphic Chemical oil based etching ink, process colors: magenta, yellow and blue, burnt plate oil 00, rags, Q-tips, bamboo pen, soft brayers and rollers.

Viscosity of ink refers to how stiff or tacky the ink is. The most viscous ink is straight from the can; less viscous ink is mixed with oil. It takes a vigorous mixing to incorporate fully the oil with ink, which is why varying the viscosity of the inks allows them to lie on top of one another without mixing. When you are applying these principles they must go in one direction only; viscous to loose or loose to viscous.

I start with a viscous layer mixed straight from the can and roll a thin layer onto my plate using a soft brayer. This is my darkest layer. I create an image using reductive methods, removing and manipulating the ink with Q-tips, bamboo pens, rags and my hands. I work with one image at a time on my plate; the finished print experiences many runs through the press before it is complete. I have also found when working on a large complex image, I can work for three to four days without the ink drying out. I draw a section at a time, and at the end of each day, I roll an oily layer over the completed section.

For the next layer of ink I use small brayers to add the color where I desire it. The ratio of ink to oil is $\frac{1}{8}$ tsp. ink to four drops oil. After mixing my colors, I roll the ink on



my plate image, only making one or two passes. Rolling beyond this point can cause the inks to begin to blend and break down the image. I can then go back into the plate, and once more remove ink in the desired places.

In my third layer of ink the ratio is one eighth tsp. to six drops oil. When I plan my layers of ink I am also thinking about how the colors will change when applied as layers: for instance, if I have a layer of yellow and I roll over it with a blue, it becomes green. I keep a scrap of paper by my palette to test ink on, scraping one thin layer of ink over another until I have the desired effect. I also plan my ink layers dark to light. That way if I want a green and a yellow, yellow would be my last layer. You also want to keep each layer very thin—especially the layer with the most oil. Too thick of a layer and the oil can separate from the ink when going through the press, causing what is called *blanket drag*. Subsequent layers can sometimes be added by increasing the levels of oil to ink. I have found the most success with limiting the image to three to four layers.

The beauty of this technique also lies in being able to use your leftovers (ghosts) and offsets to add to other prints or begin new works. A popular plate for monotype is plexiglass, which sports a slick surface, meaning the ink easily slides off the surface in one pass through the press, leaving little or no residue. Oil-based inks however, were especially created for use on metal plates, which are my preference to use for monotype. The oil-based inks cling to the surface of the metal plate, leaving a residue or ghost, even after going through the press. I also utilize my offset





images, which are printed from a freshly-printed image while the ink is still wet. Often I will print both the offset and ghost at the same by placing three sheets of paper on my plate. The first sheet is placed face down on the ghost, the second is the freshly printed image face up, the third sheet is placed face down on the second sheet. Sometimes there is enough ink to print several ghosts. Once an image is completed I can add subsequent layers to my prints by using a stencil that covers and therefore saves the image/s printed on the paper. The background is printed last.

This technical process of printing and re-printing speaks to the flip side of normative printmaking methodology, or the second primary approach to artmaking. If artmaking is sometimes a visceral battle utilizing experimentation, destruction, and reconstruction and definitely hard on printmaking paper, this method encourages making a plan of attack through composition and subject studies beforehand. Alongside this compositional planning I also have a plan for color. When I saw the *Matisse and Diebenkorn* show a few years ago at SFMOMA, I came home with several reproductions of images by both artists that possessed identical-looking color palettes and compositional ratios. I used my paint chips to test how close they really were, and found they were almost exact, though very different paintings. (Examples of this phenomenon include: Matisse's *Landscape: Broom*, 1906 and Diebenkorn's *Berkeley #5*, 1953; also Matisse's *Yellow Pottery from Provence*, 1905 and Diebenkorn's *Berkeley*, 1955.) Though, early on, sometimes Diebenkorn directly



visually references specific works by Matisse, his later work, such as the *Ocean Park* paintings, features colors inspired by Matisse and the quality of light in his Los Angeles studio. Diebenkorn collected every book he could find on Matisse's work, but rather than keep them at his studio for workday reference, he poured over them in the evening at home with a cocktail in hand. Although inspired by Matisse throughout his life, Diebenkorn created an interpretive and masterfully unique style all his own. His *Ocean Park* series pursues this unique stylistic approach in companionship with his mentor Matisse, reveling in a common love of flat planes of color, inspired by the qualities of natural light.

In my own work I strive to continually practice this ability to productively learn from my own influences and surroundings in order to fulfill my vision, whether technically or visually. With my new body of work there is a focus on the repetition of shapes in nature, as well as the layering of dark and light images alternatively to create depth in the pictorial plane. As always, I am planning my color with paint chips.

I don't expect every artist, particularly those working in the mercurial field of monotype, to follow my exact set of practices, but rather encourage you to think like Diebenkorn—does color planning bring value to the nuances of your technical approach? This is worth considering, as I believe color planning and alternative technical methodologies in monotype to be almost intrinsically linked. More broadly, this approach reflects the illustrious heritage we tap with the practices of our artistic predecessors, imagining new techniques, emotions, and futures for our work.

I leave you with this—if you end up using paint chips, please be polite to your paint store don't collect them all at the same time!

Artist Information

Katherine Levin-Lau is an internationally-represented printmaker, currently living and working in San Jose, CA. Her recent solo exhibitions include the Triton Museum of Art in San Jose, Villa Haiss Museum of Art in Zell, Germany, and the German American Cultural Center in Frieberg im Breisgau, Germany. Her work is in the collections of the San Jose Museum of Art, Villa Haiss Museum of Art, the Crocker-Kingsley Museum, and the Ministry of Belgium's Permanent Collection. She was recently awarded the first artist-in-residency at the American Museum of Natural History, New York in Fall 2019. She received her MFA from San Jose State University. katherinelevinlau.com

Image Documentation

Octopus in the Night Sky, monotype, 30" x 44," 2018

Seahorses with Wings, monotype, 30" x 44," 2018

Japanese Lantern, monotype, 22" x 30," 2019

Feathered Sea Star, monotype, 22" x 30," 2019

Seahorse with Ghost Leaves, monotype, 22" x 30," 2019

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The topic will be *Metamorphosis—Printing Under Pressure*. We are interested in how your work as an artist changed because of a deadline, personal crisis or a global pandemic. How did that enable you to express your ideas, discover a new direction and develop a cohesive body of work? We are also interested in your process, including methods and materials. Please recommend any other artists (including their website) who could contribute to this topic. Please spread the word! Contact bobroccoart@gmail.com.



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